Landscape Urbanism

from a methodological perspective and a conceptual framework

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Preface/
theory is practical

During my studies in landscape architecture, I hardly ever encountered the term landscape urbanism within the scope of the university education. However, the Landscape Urbanism Reader was mentioned as highly educational and inspirational by some invited lecturers and tutors. Once or twice copies of a few extracts from the book were provided. Reading these extracts, my interest for landscape urbanism was aroused. I found that the texts in the anthology had the ambition to inject the urbanism discourse with something new. The concept of landscape was empowered. Landscape urbanism's way of understanding the contemporary city is as intellectually challenging as it is inspirational. The reading of landscape urbanism literature generated my interest to relate theory to practice and to redefine the role of theory. Hence I saw the possibility to engage in the subject during my master dissertation.

The reading of The Landscape Urbanism Reader provided me with liberating aha experiences, since it made me view the purpose of landscape architecture differently. It made me pursue my quest for knowledge within the landscape urbanism framework by investigating if this revelation could be further generated as the ideas of landscape urbanism were transferred to the practical realm. Hence, it is my wish that this paper will evoke aha experiences of both theoretical and practical character.

Postscript

Landscape urbanism is contemporary. Recent publications have not been analysed in this paper due to the late publications in relation to the deadline of this paper. These publications include for example A Landscape Manifesto by Diana Balmori & Michael Conan, published in November 2010. Publications like this indicate the strong general interest on the subject of landscape urbanism and its applicability within the architecture disciplines. A reading of A Landscape Manifesto is highly recommended. A reflection of its content in relation to this paper is welcomed by the author.

Abstract/

Landscape urbanism has for the last decade been a topic for debate among practitioners and theorists involved in forming the contemporary city. The advocates for landscape urbanism mean that traditional dichotomies like city and country are invalid to illustrate the contemporary urban realm. Rather, a new urban morphology has evolved, which calls for new methods and models when approaching the city. Landscape urbanism suggests a revaluation of landscape in order to develop these approaches. This paper sets out to map how this is addressed within landscape urbanism. Through the analysis of texts and projects concerning landscape urbanism, connections, patterns and characteristics regarding models and strategies of landscape urbanism methodology are presented. Because of landscape urbanism's fluid character, the paper is of a discursive and investigative character.

In the second chapter it is studied how landscape design has drawn inspiration from the scenic landscape for centuries. Landscape urbanism however suggests a possibility to draw inspiration from the functions and operational aspects of landscape, rather than its aesthetic qualities. The revaluation of landscape as landschaft implies a focus on process, contingency and the integration of cultural and natural processes over time. However, replacing landscape as landschaft and discarding a dichotomous thinking in the planning discourse is not new to landscape urbanism. This thinking is rather a trend which landscape urbanism is a part of.

Viewing landscape as a construct and concept opens up for several interpretations. In the third chapter, three different perspectives on how landscape is interpreted are presented. First Ideologies of landscape urbanism, second The concept of landscape as methodology and third Defining ideas of landscape urbanism. The three perspectives complement each other in providing a nuanced image of how landscape is interpreted within landscape urbanism.

The first perspective Ideologies of landscape urbanism discusses how the two main orientations of landscape urbanism, The Machinic and Field operations interpret landscape differently. The Field operations approach corresponds to landscape urbanisms idea of intertwining different processes over time. In the Machinic mode, landscape is interpreted as a source. From this source, data is collected to supply a form-generating computer program.
The second perspective of chapter three, The concept of landscape as methodology, concludes that landscape is interpreted at two levels within landscape urbanism, metaphorically and operationally. On the one hand, landscape is used to describe and envision the contemporary city. This means a metaphorical ideal of how the city can be approached through the lens of landscape. On the other hand, the revaluation of landscape also means to see the dynamic abilities of landscape as a model for design. Methods and operational strategies that can address and further the dynamic conditions are encouraged.

The third perspective of chapter three, Defining ideas of landscape urbanism, describes how two defining ideas of landscape urbanism are derived from the interpretation of landscape as surface and ecosystem. Landscape as surface interprets landscape as a thick mat and heterogeneous field where landscape is regarded as an infrastructure that can organise the city. Interpreting the landscape as an ecosystem means to emphasise process and the interaction of natural, cultural, economical and social processes as well as an understanding of how they affect the spatiality of a site over time. Landscape as surface and landscape as ecosystem both take departure in the dynamic city and aims at developing operational strategies to address it. Hence, both defining ideas stress flexibility, the design of process and frameworks that can tackle contingency, bottom-up phenomena, synthesis of different systems and the rejection of formal compositions. However, the suggestions in which way these characteristics are fulfilled differ since the interpretations of landscape are different. This generates different conceptual models and strategies to use in the practical work. These models and associated strategies are presented in the fourth chapter.

First, the fourth chapter defines methodological approaches of landscape urbanism. This section discusses how the focus on process and anticipation within landscape urbanism means a new approach to site. Site is more than what meets the eye; social, economical and ecological process over time and how they have affected the site must be taken in consideration. Landscape urbanism suggests interdisciplinary teams to fully understand a site. To design for change, and to be able to incorporate different kinds of systems of social, economical, natural and cultural character, the design of strategies and frameworks are promoted. A framework gives instructions to the site and orchestrates the processes on the site rather than accomplishes a static form. Representation is used as a tool in the process of understanding the site as well as in the process of conceptualizing and contextualizing the site. Learning within landscape urbanism is regarded as a valid approach in order to develop new methods and techniques and to truly understand a site. Learning also means the exchange of information with other disciplines, with the public and with having a "conversation" with the site. These methodological approaches of landscape urbanism suggest a new role for the designer as well as a new idea of site.

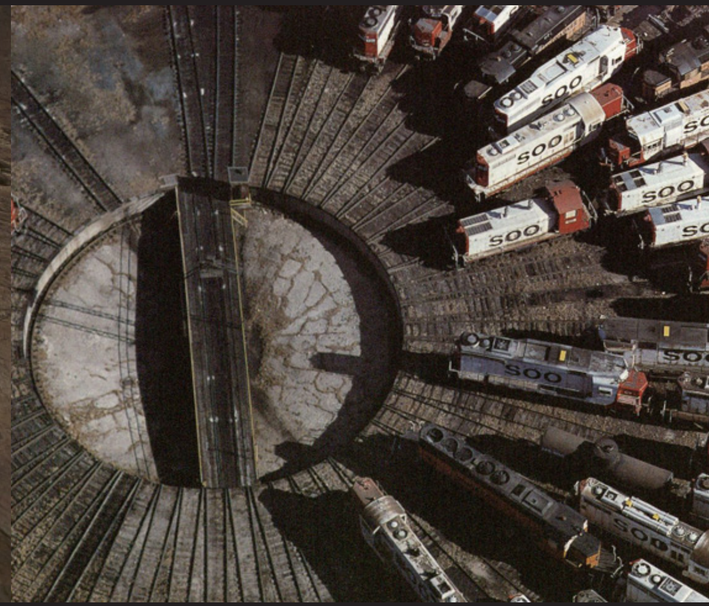
Second, the fourth chapter defines conceptual models and strategies to

Abstract/

use in the practical work. The models and strategies are derived from the interpretation of landscape as surface and ecosystem, and not as the traditional interpretation of landscape as scenery. The rejection of landscape as a scenic image doesn't mean that form is discarded. Rather, the models and strategies demonstrate that form and process don't have to compete; an integration of form and process can rather inspire to new aesthetical and functional solutions. Models in this context mean basic working models that help to illustrate an approach or a concept. Hence, they have a potential to act as a tool in the design process. The associated strategies explain how the conceptual models are transferred to practice and subsequent form. The models and strategies presented in this paper thus illustrate possibilities to generate form in a landscape urbanistic context.

The models derived from the idea of landscape as surface are framework, layering, surface/inverted cityscape and program. These are associated with strategies such as patch, grid and fields, folding and infrastructure. The models derived from landscape as ecosystem are process, resilience and shifting scales. These models are associated with strategies such as succession, interaction-information and phasing flexibility. The strategies are illustrated by projects related to the landscape urbanism discourse in order to make them understandable and reflect on what they could mean in practice. Associating the models and strategies to landscape urbanism projects thus confirms and relates them to a landscape urbanism context.

A matrix relates the models and strategies to how they interpret the landscape metaphorically and operationally. Hence, the matrix includes the perspectives presented in prior chapters of the paper and thus functions as a summarizing and contextualizing agent for the paper. The matrix should not be seen as a complete overview of landscape urbanism methods and strategies, rather it suggests a contextualization and a basis for a conceptual framework regarding landscape urbanism methodology. The contribution of the matrix is to provide an idea of how landscape urbanism could be applied in practice. Further, the matrix may act as a structuring guide in making landscape urbanism methodology more accessible, but it is not a manual. The detailing of this paper is rather at a conceptual level. This is due to landscape urbanisms broad approach, and that its methodology is not yet that defined in order to present detailed description of its working methods. Nevertheless, the matrix could in the future act as a model in the mapping of landscape urbanism. Thus, the matrix has a potential to act as an instrument in future research regarding landscape urbanism methodology. Therefore, this paper not only provides results regarding an overview of landscape urbanism methodology characteristics, but also an instrument for future research.



Both photos from James Corner and Alex McLean *Taking measures Across the American Landscape* (1996).

Sammanfattning

Under det senaste decenniet har landscape urbanism debatterats av praktiker och teoretiker aktiva inom stadsbyggnadsdiskursen. Förespråkarna för landscape urbanism framhåller att traditionella dikotomier som stad och land är otillräckliga för att beskriva den samtida staden. Dynamiken i den moderna staden har resulterat i en ny urban morfologi. Denna behöver tillmötesgås med nya metoder och strategier. Landscape urbanism föreslår en omvärdering av konceptet landskap för att utveckla dessa strategier. Denna uppsats syftar till att kartlägga hur konceptet landskap tolkas samt vad det innebär i form av metoder inom landscape urbanism. Genom analys av texter och projekt som associeras till landscape urbanism kartläggs samband, mönster och egenskaper gällande landscape urbanisms metodologi. På grund av landscape urbanisms abstrakta och komplexa karaktär är uppsatsen diskuterande och undersökande.

I uppsatsens andra kapitel diskuteras det hur landskapsarkitekturen har hämtat inspiration från det natursköna landskapet i århundraden. Landscape urbanism föreslår dock möjligheten att hämta inspiration från landskapets funktionella och operativa egenskaper snarare än dess estetiska kvaliteter. Omvärderingen av landskapet som landschaft innebär fokus på process, oförutsedda händelser samt en syntes av kulturella och naturliga processer över tid. Att ersätta landskapet som landschaft och att överge det dikotomiska tänkandet i planeringsdiskursen är inte nytt för landscape urbanism. Detta tänkande är snarare en tendens och trend som landscape urbanism är en del av. Att se landskapet som en konstruktion och koncept öppnar upp för flera olika tolkningar. I det tredje kapitlet presenteras tre olika perspektiv på hur landskapet tolkas inom landscape urbanism; landscape urbanisms ideologier, begreppet landskap som metodologi och slutligen landscape urbanisms definierande idéer. Dessa perspektiv kompletterar varandra och ger en nyanserad bild av hur landskapet tolkas inom landscape urbanism.

Det första perspektivet, landscape urbanisms ideologier beskriver hur två inriktningar inom landscape urbanism, Machinic mode och Field operations, tolkar landskapet olika. Field operations tillvägagångssätt motsvarar landscape urbanisms idé om ett processbaserat tillvägagångssätt genom att sträva efter en sammanflätning av olika processer över tid. Machinic mode tolkar landskapet som en källa, varifrån data samlas för att mata ett formalstrande dataprogram. Denna inriktning är mer inriktad på form.

Det andra perspektivet i kapitel tre, begreppet landskap som metodologi, studerar hur landskapet tolkas på två olika nivåer inom landscape urbanism, bildligt och operativt. Å ena sidan används landskapet för att beskriva och projicera den samtida staden. Detta innebär en metafor om hur staden kan tolkas genom ”landskapslinsen”. Å andra sidan innebär omvärderingen av landskapet också framhävandet av den dynamiska förmågan hos landskapet. Denna förmåga ses som en förebild för design; metoder och operativa strategier som kan bemöta och förstärka dynamiska förhållanden uppmuntras.

Det tredje perspektivet i kapitel tre, landscape urbanisms definierande idéer, beskriver hur två huvudsakliga idéer inom landscape urbanism härrör från den bildliga och operativa tolkningen av landskapet som yta och fält samt som ekosystem. Landskapet som yta och fält tolkar landskapet som en tjock matta och heterogent fält. Landskapet betraktas som en infrastruktur som kan organisera staden. I tolkningen av landskapet som ett ekosystem betonas processer och samspel mellan naturliga, kulturella, ekonomiska och sociala system samt en förståelse för hur de påverkar en plats rumslighet över tid. Landskap som yta och fält samt landskap som ekosystem utgår båda från den dynamiska samtida staden och syftar till att utveckla operativa strategier för att hantera den. Därför framhålls flexibilitet, utformningen av processer och ramverk som kan hantera oförutsedda händelser, et holistiskt synsätt, syntes av olika system och ett förkastande av formalistiska kompositioner. Eftersom landscape urbanisms definierande idéer tolkar landskapet olika, varierar förslagen på hur dessa egenskaper ska uppfyllas. Detta genererar olika konceptuella modeller och strategier att använda i det praktiska arbetet. Dessa modeller och tillhörande strategier presenteras i fjärde kapitlet.

Det fjärde kapitlet diskuterar först landscape urbanisms metodologiska angreppssätt. Landscape urbanisms fokus på process och föregripande innebär en ny syn på platsbegreppet. Platsen är mer än vad man ser; sociala, ekonomiska och ekologiska processer över tid samt hur de har påverkat en plats måste tas i beaktande. För att förstå komplexiteten i en plats till fullo, föreslår landscape urbanism ett tvärvetenskapligt arbetssätt. Att designa för förändring och process innebära att processer på och kring platsen identifieras och väljs ut, sedan arbetar man huvudsakligen med dessa processer, genom att ge instruktioner till platsen via ett uppställt ramverk. Fokus hamnar på att arbeta med dessa processer, rikta dem ”orkestrera” dem, snarare än på form. Representationstekniker som diagram används som arbetsredskap under denna process. Representation ses inte bara som ett sätt tt förmedla och presentera ett projekt, utan det identifieras som ett verktyg i arbetsprocessen, från tanke till konceptualisering. Viss fokus läggs även på att se designprocessen som ett tillfälle till ackumulering av nya kunskaper av såväl teknisk som social karaktär, bl. a genom brukarmedverkan. De metodologiska tillvägagångssätt landscape urbanism föreslår innebär sammanfattningsvis en ny roll för designern samt en ny uppfattning om vad begreppet plats innebär.

Sammanfattning

Vidare studerar det fjärde kapitlet modeller och strategier att använda i praktiken. Dessa modeller och strategier härrör från tolkningen av landskapet som yta och fält samt som ekosystem. Avståndstagandet från den pittoreska tolkningen av landskapet betyder inte att frågan om form och design förbises inom landscape urbanism. De modeller och strategier som presenteras i kapitel fyra visar att form och process inte behöver konkurrera; en samverkan mellan form och process kan snarare inspirera till nya estetiska och funktionella lösningar.

Modeller i denna mening innebär arbetsmodeller som hjälper till att förklara ett förhållningssätt eller ett koncept. De har därför en potential att fungera som ett verktyg i designprocessen. De tillhörande strategierna förklarar hur modellerna kan överföras till praktiken och alstra form. Detta visar på möjligheterna att generera form inom landscape urbanism. Modeller som härrör från idén om landskapet som yta och fält är bland annat ramverk, organisation i lager, yta/inverterad stadsbild och program. Dessa är förknippade med bland annat följande strategier; rutnät och fält, veckning och infrastruktur. Modellerna som härrör från idén om landskapet som ekosystem är process, återhämtningsförmåga och skiftande skalor. Dessa modeller är förknippade med strategier som succession, interaktion- information och fasning av flexibilitet. Strategierna illustreras med projekt kopplade till landscape urbanism- diskursen för att göra strategierna begripliga och reflektera över vad de kan betyda i praktiken. Att relatera modellerna och strategierna till landscape urbanism projekt bekräftar och sätter dem i en landscape urbanism- kontext.

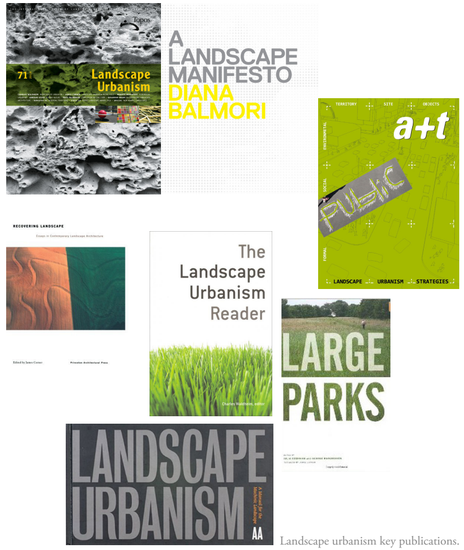
En matris relaterar modellerna och strategierna till landscape urbanisms definierande idéer samt till hur de tolkar landskapet metaforiskt och operativt. På detta sätt relateras perspektiv som presenterats i tidigare kapitel till modellerna och strategierna. Därmed har matrisen en sammanfattande och kontextualiserande aspekt. Matrisen skall inte ses som en fullständig översikt över landscape urbanisms metodologi utan snarare som en grund för ett konceptuellt ramverk gällande landscape urbanisms metoder. Matrisens bidrag är att ge en uppfattning om hur landscape urbanism har potential att tillämpas i praktiken. Dessutom kan matrisen fungera som en guide i att göra landscape urbanisms metoder mer tillgängliga. Matrisen är emellertid ingen manual. Denna uppsats beskriver snarare landscape urbanisms metodologi på en konceptuell nivå. Detta beror på landscape urbanisms bredd och att dess metoder ännu inte är tillräckligt definierade för att tillhandahålla detaljerade beskrivningar av arbetsmetoder. Trots det har matrisen potential att fungera som en utgångspunkt för framtida kartläggningar av landscape urbanisms metoder. Därmed har matrisen en förmåga att fungera som ett instrument i framtida forskning om landscape urbanisms metoder. Därför presenterar denna uppsats inte bara översikt av landscape urbanisms karakteristiska metoder, men också ett instrument för framtida forskning.

CHAPTER ONE/ INTRODUCTION AND WORKING PROCESS

Introduction

This paper takes as its subject to analyse landscape urbanism from a methodological point of view. The focus is to study what landscape urbanism holds regarding methods, strategies and tools applicable in practice. The motivation of landscape urbanism is the creation of a sustainable city regarding several parameters, such as ecological, social, economic and aesthetic aspects (Waldheim, 2010). In this creation, landscape is revaluated and acts as a model. Within the landscape urbanism discourse, landscape is more than a back-drop to architecture. Rather, it is interpreted in an operational sense. The structural qualities of landscape are highlighted as a point of departure when designing the city. This interpretation of landscape means an emphasis on a holistic approach and further the designing for resilience, meaning an ability to cope with external changes over time. In the bringing together of urban structures and landscape organizational systems, the focus is on action and process rather than appearance.

Other recurring phrases within the landscape urbanism discourse are interdisciplinarity, new approaches to represe ntation and process-oriented work. This paper engages in the methodological aspects of landscape urbanism by offering a structural overview of its methodological characteristics and a subsequent reflection on their consequences. Whether or not these methodological characteristics are new, old, revised or hybridized, I will not engage specifically in. Instead I refer to Mapping Landscape Urbanism by Muir (2008) for a more complete review on the theoretical and critical context of the emergence and theories of landscape urbanism. The paper at hand is primarily intended for practitioners and theorists within the architecture disciplines interested in contemporary theories of the disciplines. I assume that the reader is familiar with landscape urbanism as a complete introduction of the subject would compete with the ambition of the paper; to study the methodological ideas of landscape urbanism and discuss them. Instead of elaborating on sidetracks, suggestions for further readings will be mentioned currently in the paper.



Landscape urbanism key publications.

The landscape urbanism framework is difficult to grasp. It was formulated by architects, landscape architects, urban designers and planners and could be seen as a collection of ideas with a wide approach on the urbanistic agenda. One of the most complex but yet intriguing aspect of landscape urbanism is its incoherent character which makes it difficult to frame but therefore allows for several perspectives. In addition, landscape urbanism is not unified by a single defining manifest, though a current try has been made by Diana Balmori and Michael Conan with the publication of A Landscape Manifesto (2010). The characterization of landscape urbanism by Richard Weller (2007), listed on the next page, might further help to define what landscape urbanism is about and what it is not about.

The publication to the left are currently referred to within the landsacpe urbanism discourse; Topos #71, A Landscape Manifesto, a+t Strategy Public, Recovering Landscape, The Landscape Urbanism Reader, Large Parks, Landscaâe Urbanism-A Manual for the Machinic Landscape.

Introduction/
what is landscape urbanism?

The defining aspects of landsacpe urbanism listed by Weller (2007) will be elaborated on in the paper. According to Weller: *landscape urbanism claims to:*
1. align itself with contemporary scientific paradigms of nature as a complex, self-organizing system, conceptualize, interpret and directly engage the city as a hybrid ecology;
2. emphasise the creative and time-developmental agency of ecology in the formation of urban life as opposed to envisaging an ideal equilibrium between culture and nature;
3. include within the purview of design all that is in the landscape – infrastructure and buildings etc. and do this at scales which bridge the divide between landscape design, landscape ecology and landscape planning;
4. experiment creatively with computer driven methods of mapping social and ecological forces which affect a given site so as to get closer to the complex dynamics of the landscape;
5. aim for structural efficacy and instrumentality by design and to apprehend both site and program as creative subjects and opportunities but generally privilege a rational understanding of site forces, not the designer's subjectivity
6. foreground the landscape as the ultimate system to which all goes and from which all comes, a template for urbanism.

Inversely, landscape urbanism rejects:
1. the Garden (paradise) as landscape architecture's ur-metaphor – (replacing it with the City);
2. the landscape as urbanism's other, as a repressed, gendered, and passive layer;
3. a puritanical nature that needs to be reinstated as such to effect equilibrium between nature and culture;
4. designing toward fixed and final objects or aesthetic intuitions regarding formal composition;
5. style, image, scene, and symbolism as dominant aspects of design;
6. neo-conservative new urbanism on the one hand and avant-garde originality on the other;
7. architectural and landscape architectural design as the production of isolated objects; superficial contextualism and commercial styling of places either aloof to, or in some way merely compensating for the instrumentalities of the world around;
8. modernist planning and its pretence to control and contemporary planning which is devoid of the creative processes common to design processes;
9. a McHargian binary coding between nature and culture. (Weller, 2007 p.67)

The idea of landscape as a structuring element for the city, as mentioned by Weller (2007) in point 6, is not new to landscape architects. One could claim that examples from the history of city planning, architecture and landscape architecture, such as Boston Back Fens by Olmsted, Garden Cities of Ebenezer Howard and Villa Radieuse by le Corbusier, demonstrate how landscape is qualified to organize the city while contributing to the urban experience in a positive way. However, the proponents of landscape urbanism, e.g. Corner (2010) mean that landscape urbanism presents new ideas, mainly regarding the dissolving of traditional dichotomies like urban-rural, nature-culture and planning-design. According to the ideas of landscape urbanism, these dichotomies are not valid when addressing the contemporary urban realm. The morphology of the contemporary city has changed since prior urbanistic ideals and models like modernism prevailed. Since today's cities include hybrid typologies, too complex to categorize as either urban or rural, the proponents of landscape urbanism call for a new model that enhances interdisciplinary approaches and process in order to address the complexity and indeterminacy of the contemporary city. In this process, landscape acts as a model, since it is able to include both spatially and temporally aspects, culturally and naturally prospects. In short how things work in space and time.

Landscape urbanism is neither the product of one academic circle but many, mainly in the United States with Harvard Graduate School of Design and University of Pennsylvania as epicentres of landscape urbanism. The main instigators of landscape urbanism, recurrently mentioned and referred to within the discourse, are Charles Waldheim, professor of architecture at GSD Harvard, Mohsen Mostafavi, dean and professor of architecture at GSD Harvard and James Corner, chair and professor of landscape architecture at the University of Pennsylvania, School of Design. During the last decade landscape urbanism has spread across the Atlantic. Courses in landscape urbanism are held at the Technische Universität, Vienna and at Versailles, Paris among others. There is further a master program in landscape urbanism at the Architectural Association in London. In a Scandinavian context, Danish Schools of Architecture, such as The Royal Danish Academy of Fine Arts, School of Architecture in Copenhagen and Aarhus School of Architecture, are engaged in the subject of landscape urbanism. In Asia, offices such as Turenscape are engaging in issues of landscape urbanism. The emergence of landscape urbanism worldwide has been accompanied by a divergence according to Gray (2006). Schäfer (2010) talks about this divergence and mentions off-springs like ecological urbanism and process urbanism.

Merging of nature and culture.

The variety and divergence of landscape urbanism in combination with its broad approach on the urbanistic agenda, sometimes makes it difficult to define what landscape urbanism is about, and what it is not about. However, the concept of using landscape as a model for urbanism holds the framework together.

Regarding the methodology of landscape urbanism little has been written. Some literature address the relation between theory, method and form regarding landscape urbanism and projects associated with landscape urbanism; Rune Christian Bach's paper Surface Strategies som Landskabsurban Metode (2008) and Rune Christian Bach's and Thomas Juel Clemmensen's paper Fem Landskabsstrategiske Principper–Landskab som Optik og Model i den Arkitektoniske Planlægning (2005), Christina Kvisthöj's paper Life forms–Learning from Corner (2008) and Anita Berrizbeitia's Re-placing Process (2007). These papers all primarily reflect on landscape urbanism methods from one perspective respectively. Bach (2008) investigates the practical potential of James Corners surface strategies and Kvisthöj (2008) discusses Corners idea of ecology in relation to the practice. Bach et al (2005) investigate how having landscape as a model can be transferred to practical work. Berribeitia' s (2007) paper discusses how the ecological approach has affected the working methods of landscape urbanism and the meaning of place. The lack of overviews of the landscape urbanism methododlogy from a wide perspective motivated the conceiving of this paper.

Introduction/
landscape urbanism and landscape architects

In spite of critical voices raised regarding landscape urbanism, the fact remains that the framework has an appeal to me as a landscape architect student. Landscape urbanism means an acknowledgement not only of the idea of landscape, but also of the profession and its landscape-oriented methods. Landscape urbanism holds three main interesting aspects for landscape architects according to me.

First it is advocated that the landscape should be upgraded to a structural element when designing the city, rather than a picturesque back drop to architecture. This inverted model of the city, were public space is emphasised as the point of departure when designing the contemporary city, is highly attractive for a large amount of landscape architects. The ideas of landscape urbanism highlights the primary medium of landscape architecture, the landscape which landscape architects are familiar with.

Second, landscape urbanism presents a model for sustainability by applying a holistic view on the urban realm. This ambition is explained by Corner as follows: *landscape urbanism suggests a broad cross-disciplinarity not simply across the boundaries of architecture, planning and engineering, but also across ecology, geography, anthropology, cartography, aesthetics and philosophy.It also suggests multi-scalar modes of practice, where very large scale urban and environmental issues may be organized and influenced while at the same time focusing upon much smaller, tactile scales of engagement* (Corner, 2010 p.26). Weller (2007) also comments on the holistic approach of landscape urbanism, which consequently includes bridging the gap between planning and design: *[…] landscape urbanism warrants serious discussion because it alone seems theoretically prepared and practically capable of collapsing the divide between planning and design. This also entails a compression of divisions between architecture and landscape, between fields and objects, between instrumentality and art* (Weller, 2007 p.72). The holistic interdisciplinary approach, united by the idea of landscape as a model for urbanism, will support the creation of sustainable cities, according to the advocates of landscape urbanism.

Third, the definition of landscape within landscape urban ism supports a view in which landscape is seen as performative and operational as opposed to a static image. This means an emphasis on dynamic approaches and strategies, which landscape architects are trained for. John Brickerhoff Jackson's definition of landscape is cited on the first page of Recovering Landscape (1999), one of the key publications of landscape urbanism: *A landscape is a space deliberately created to speed up or slow down the process of nature.* Bach and Clemmensen (2005) mean that this points at a particular functionality of the landscape, namely its ability to support and cope with natural and cultural processes over time. With this ability, Bach et. al (2005) suggest that interesting planning perspectives are raised since there is a potential to address processes in urban planning regarding both spatiality and temporality. The notion about landscape as a dynamic structure thus presents a more flexible planning practice, analogous to the more action-oriented aspect of landscape or how the landscape works. The dynamics of landscape have fostered landscape architects ability to deal with uncertainty and unpredictable situations (Bach et al., 2005). Hence, landscape architects are trained to incorporate unpredictability. Geuze reflects on landscape architects natural ability to deal with uncertainty and unpredictable situations: *Architects and industrial designers often see their designs as a final product of genius, whose aesthetic entirety originated in their minds. A design like that is thrown off by the slightest damage. Landscape architects have learnt to put that into perspective, because they know that their designs are continually adapted and transformed. We have learned to see landscape not as a 'fait accompli', but as the result of countless forces and initiatives* (Geuze cited in Bach et al., 2005 p.91).

Geuze expresses a mindset where the landscape is activated in relation to both natural and cultural forces in an area rather than being designed as a finished work (Bach et al., 2005). Hence, the aspect of time and change is crucial to landscape architects and their working methods as well as to landscape urbanism. This overlap of landscape urbanisms ambition to address a dynamic approach and landscape architects competence on working with an ever-changing medium, mean a potential for landscape architects to engage in landscape urbanism; its theory and practice.

Lindholm (2008) suggests that landscape urbanisms merging of knowledge from architecture, landscape architecture, urban design, urban planning and landscape planning, gains landscape architecture the most since the ideas and methods of landscape architecture are highlighted. She means that landscape urbanism will not change landscape architecture as such, it will rather *create a bridge of communicating and influencing into the fields of planning, architecture and urban design and thereby provide a uniting landscape for those disciplines.* (Lindholm, 2008 p.4). This bridge is not a one-way

street and it is highly possible that the fruit of landscape urbanism will be an exchange of knowledge both ways.

The focus on the ideas and methods related to landscape architecture means an emphasis on ecology, process and site where form and process influence each other. The holistic approach of landscape urbanism means that the form to a larger extent is derived from the processes of a site. Could it be that these approaches and methods, derived mainly from the fields of landscape architecture and ecology, are valid and useful in the process of tackling the indeterminacy and fluid character of the contemporary city? If so, landscape architects have a potential to engage in these issues in theory and practice. Landscape architects are the experts of the landscape medium on different levels. In practice landscape architects know which models and methods are appropriate for dealing with the landscape. In theory landscape architects have a holistic overview and are able to put a site in context through space and time. Further landscape architects have knowledge in prior theories of landscape architecture and urbanism which will enable the contextualisation of the critical context of landscape urbanism. I suggest that these attributes make landscape architects well suited to engage in questions of landscape urbanism.

A new horizon.

I assume that there are approaches and abstract models of landscape urbanism ready to be implemented, though they are hidden behind the highly abstract formulations of its instigators. To highlight these models will possibly encourage the understanding of landscape urbanism, make it more tangible and hopefully support landscape architects to embrace or disregard landscape urbanism and its methods.
I imply that the dynamic character of landscape urbanism characterizes the methodology as well. It is partly fluid in its character as it absorbs new currents, ideas and technology according to context. However, I assume that there are some fundamental recurring methodological ideas of landscape urbanism.

I regard two main issues concerning landscape urbanism to have a potential to be addressed further in order to bring the discourse on landscape urbanism forwards. These two issues constitute the motivation of the paper.

First landscape urbanism has revaluated the concept of landscape by giving it a deeper meaning; from the pictorial description to landscape as a medium through which the contemporary city is approached and as a lens through which it is interpreted (Waldheim, 2006). Landscape as a model though, is less defined. The transfer from theory to practice is somehow hidden in the landscape urbanism discourse. This might be due to its ambitious approach on the urban agenda. Waldheim (2010, p.21) suggests that the landscape urbanism discourse is ready for a new phase: *The now well-established discourse around landscape urbanism is ripe for middle-aged reasonableness, a midlife crisis, or both[…]While it may be true, as has been recently argued, that the urban form proposed by landscape urbanism has not fully arrived, it would be equally fair to say that landscape urbanism remains the most promising alternative to urban design's formation for the coming decades.*
I reason that this "middle-aged reasonableness" means to consider landscape urbanisms relation to methodology. Without

methodology it is problematic to derive *the urban form proposed by landscape urbanism* that Waldheim mentions. Therefore, this paper describes and discusses the main methodological ideas of landscape urbanism. It is my belief that in order to enable landscape urbanisms applicability and potential, the theoretical discourse must be intertwined with practical questions of method and applicability. This will help to make landscape urbanism tangible. It might require a challenging somersault from abstract theory to concrete practice and form. However, in the context of a partly practical profession like landscape architecture, I find it valuable to consider the relation between theory and practice. This means to find out what gains landscape urbanism may provide in practice and relate it to theory. Knowing a subject in theory and in practice has a potential to generate new ideas and to bring our knowledge further.

Second, the writings of landscape urbanism have mainly been a product of theorists and practitioners of architecture. There is a potential for landscape architects to engage in the subject by analysing and suggesting new ways of thinking and acting within the discourse. This will enable the realization of the interdisciplinary approach that landscape urbanism proposes. It will also mean a possibility for landscape architects to affect the theoretical ideas and the methodology of landscape urbanism. However, this might prove difficult since the writings of landscape urbanism, as inspiring as they are, are predominantly theoretical and abstract in their character. It is in the process of developing the library of landscape urbanism and its applicability that landscape architects have a possibility to interact in the discourse.

Aims and objectives

Gunilla Lindholm (2008) highlights that all papers in the key publication of landscape urbanism, The Landscape Urbanism Reader, are written by practitioners. According to Lindholm (2008) this could encourage a more inclusive approach, where theory and practice are merged. I assert that this merger could gain the exchange of knowledge and experience between theory and practice. To encourage this potential, I have formulated the aim of the paper: **Through the analysis of texts and projects concerning landscape urbanism, I aim at making connections and unravel patterns and characteristics regarding models and strategies of landscape urbanism methodology. I will discuss and reflect on their applicability in practice.**

The main methodological approaches of landscape urbanism will be addressed, (where as the fine tuning of the methods, such as new technology etc., will hopefully be revised with more recurring intervals in the practice).

The following objectives are added in order to contribute to the study of the methodology of landscape urbanism; how it is described in theory and how it is realized in practice:

How is the concept of landscape interpreted within landscape urbanism?
Are there characteristic methods of landscape urbanism?
What are the practical potentials of these characteristics?
Does the role of the designer change with landscape urbanism?

The working method for conceiving this paper has been of an investigative and discursive character, inspired by grounded theory. I have worked with text analysis and discursive writing. No firm research question was formulated initially. Alternating between reading, writing and searching for literature simultaneously proved to be an efficient way to process and understand the subject as well as to structure my thoughts. The working method and working process are illustrated with diagrams and explanatory texts on the following pages. The phases of conceiving the paper are summarized as well as a the tools which I applied to structure the working process and to reach results.

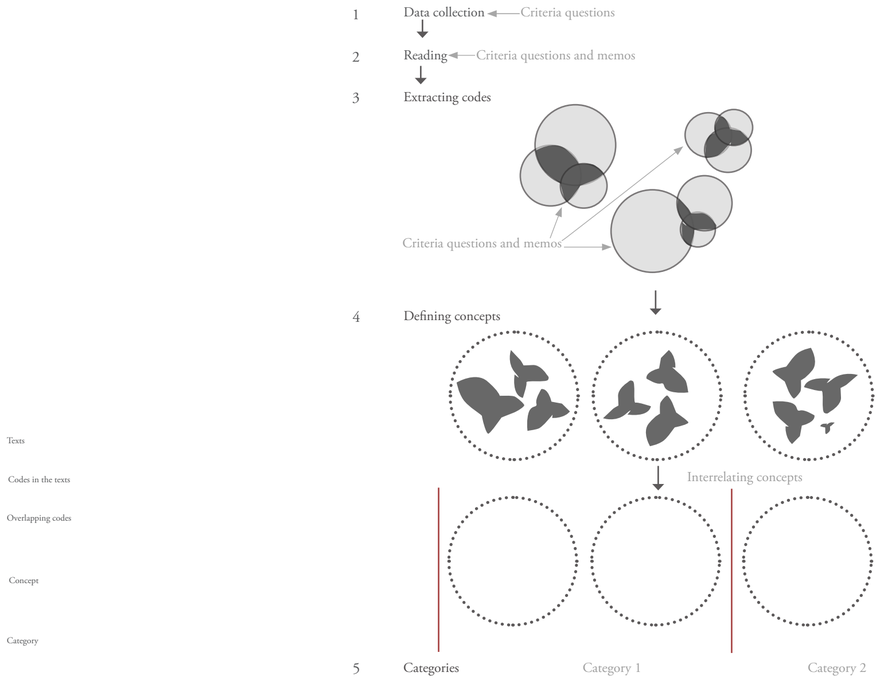
The working process was organized in six phases. This organization was developed gradually through the conceiving of the paper. The first phase was defined by a choice of working method. The second phase was defined by a general data collection of about two weeks. The second to the fifth phases were defined by the results I achieved in the form of defining categories.

The *first* phase could be seen as a general orientation phase where I got a grasp of the nature of landscape urbanism in order to decide upon which working method I would apply. Hence, the nature of landscape urbanism motivated my working method. The *second* phase was an initial data collection. The *third* phase meant reading, writing and searching for data with the ambition to analyses how the concept of landscape was interpreted within landscape urbanism according to the first objective: How is the concept of landscape interpreted within the landscape urbanism methodology? To find out about this I set up *criteria questions*. These criteria questions helped me to *close read* the texts and thus focus my research. The criteria questions and the close reading further helped me to extract *codes*. These codes were characteristics of the texts, the core of the texts, in the form of notions, ideas, terms and phrases. The codes were noted through *memo-keeping* in the form of notes, highlighting texts and making copies and sketches. The memos describe which ideas were emerging from the data collection and the analysis of the

texts. Having read different texts and keeping memos while reading them, I could see where codes were *overlapping;* where the same characteristics, phrases and ideas were recurring in several different texts. These overlapping of codes were related to each other in order to organize them in *concepts*. To accomplish this, further criteria questions were asked to narrow down several overlapping codes to a few concepts. Lastly the concepts were related to each other in order to put them in *categories*. In the *third* phase, this working method helped me to categorize two different categories in how landscape is interpreted within landscape urbanism; Ideologies of landscape urbanism and The concept of landscape as methodology, see page 60. The *fourth* phase meant to further investigate how landscape is interpreted within landscape urbanism. Thus, my search was more focused on methodology than in phase three. I categorized two concepts: Landscape as surface and field and Landscape as ecosystem. These were put in the category Defining ideas of landscape urbanism, see page 68. The *fifth* phase used the same kind of working method as the prior phases. However, this time I was close-reading the first chapters of my own paper in order to find overlapping codes, concepts and categories. I categorized Methodological approaches of landscape urbanism and Models and strategies of landscape urbanism, see page 114.The *sixth* phase meant the setting up of a matrix which suggests a contextualization and basis for a conceptual framework regarding landscape urbanism methodology, see page 147.

Working method: the diagram illustrates how I worked with text analysis. The diagram is best read from top to bottom. The first step is data collection where criteria questions are asked in order to focus the data collection. The next step is reading; analyzing texts through criteria questions and memo-keeping enable the comparison of different texts and the establishment of overlapping codes. Through criteria questions, these overlapping codes are organized in concepts. These concepts are lastly put in categories. Using criteria questions and noting recurring codes helped me not only to extract information that concerned methodology, it further helped be to relate the texts to each other, see connections and put them in context.

Introduction/
working process



Phase	Action	Process of understanding	Tools
1	Orientation	Understanding the nature of landscape urbanism.	Reading, memos, data collection.
2	Choice of method	A general understanding of landscape urbanism.	Close-reading, memos, data collection, browsing, writing, criteria questions, collage-making.
3	Establishing objective 1: • How is the concept of landscape interpreted within landscape urbanism?	A general understanding of how landscape is interpreted within landscape urbanism.	Close-reading, memos, data collection, browsing, writing, criteria questions, collage-making.
3	First categorization: • Ideologies of landscape urbanism • The concept of landscape as methodology.	Further understanding of how landscape is interpreted within landscape urbanism.	Close-reading, memos, data collection, browsing, writing, criteria questions, collage-making.
4	Second categorization: • Defining ideas of landscape urbanism	Understanding the lack of overview in the text and overlapping codes in the text.	Close-reading, memos, data collection, browsing, writing, criteria questions, collage-making, re-reading of paper.
4	Establishing of objective 2-4 • Are there characteristic methods of landscape urbanism? • What are the practical potentials? • Does the role of the designer change?	Understanding the practical potentials of landscape urbanism.	Close-reading, memos, data collection, browsing, writing, criteria questions, collage-making, re-reading of paper.
5	Third categorization: • Methodological approaches • Models and strategies of landscape urbanism	Understanding the relations of the categories.	Close-reading, memos, data collection, browsing, writing, criteria questions, collage-making, re-reading of paper.
6	Formulating the matrix		

Working process: Overall, the diagram illustrates the process of conceiving the paper and how I reached results. The diagram is best read from top to bottom. This displays the phases from phase one to phase six and how they relate to Action, Process of understanding and Tools. Action llustrates the outcome of each phase. Process of understanding illustrates how my understanding of the subject affected the categorizations in the Action column. The Tools column shows which tools I used in each phase in order to reach results.

Delimitations

As the methodology of landscape urbanism doesn't give strict directions of use and is quite broad in its approach, I had to make some delimitation. First I chose to focus on the landscape of landscape urbanism, as opposed to urbanism. I assumed that including landscape as a model is the novelty of landscape urbanism; hence focusing on how landscape is interpreted within landscape urbanism was put in priority. For a review on the concept of urbanism, I refer to Gray (2006).

Many projects and literature concerning brown-field sites have a landscape urbanism approach. Landscape urbanism partly emerged as the cities in North America and Europe faced vast lands as industrial sites were phased out. Landscape urbanism suggested that this changed urban morphology could be addressed with an approach that included landscape, influenced by landscape perspectives. However, the methods concerning these kinds of sites are thoroughly described in other papers and literature, such as the book Manufactured Sites by Niall Kirkwood, the paper Landscape Urbanism in Europe: from Brownfields to Sustainable Urban Development by Pierre Donadieu or the paper Decamping Detroit by Charles Waldheim. Additionally, the broad approach of Landscape Urbanism on social, economical, infrastructural, ecological and formal aspects of the contemporary city caused a need for delimitation. Hence, this paper focuses on the part of landscape urbanism concerning methodology, possibly useful in projects of landscape architecture.

I also choose not to immerse in the mode of landscape urbanism that primarily has an architectural approach, the Machinic mode, represented by the master program in urbanism at the Architectural Association and further described by Gray (2006). This mode focuses on architecture and computer-generated form, which I as a landscape architect student found problematic to relate to. However, this mode is briefly mentioned in the paper as it is put in relation to the more landscape architecture- oriented approach of landscape urbanism. In addition, the amount of time, twenty weeks, was a limiting factor for the work on this paper.

I am aware of the vast library of landscape theory and that landscape urbanism takes its point of departure from this imposing collection of theoretical writings, such as the collected works of Anne Whiston Spirn, Denis Cosgrove and Kenneth Olwig. However, this paper doesn't set out to discuss the relation between these writings and writings of landscape urbanism, rather I refer to Mapping Landscape Urbanism (Muir, 2010) for a more thorough review of landscape urbanisms relation to prior ideas of urbanism and landscape architecture. I am also aware of other relating fields to landscape urbanism such as green urbanism and ecological urbanism. These relating fields and their relation to landscape urbanism is briefly reviewed below, but will not be further elaborated on in coming chapters of the thesis.

What unites landscape urbanism, ecological urbanism and green urbanism is the concept of urbanism. The three movements focus on cities and they emphasise the role of the city in the contemporary realm. What separates green urbanism and ecological urbanism from landscape urbanism is their focused agenda on sustainability. Beatley (2000) refers to Agenda 21 and Mostafavi (2010) to the Brundtland Report. References like these are lacking within landscape urbanism. In comparison to the defined agendas of green urbanism and ecological urbanism, landscape urbanism is less focused as seen in the introduction chapter and in Weller's (2007) definition of landscape urbanism (see p.16). The broad agenda of landscape urbanism makes it rather difficult to keep its constituents apart such as its political, scientific and general urbanistic ambitions. The aim of landscape urbanism is not as easy to target as with ecological urbanism and green urbanism where sustainable cities is the main ambition.

The development of landscape urbanism but especially the development of green urbanism and ecological urbanism is analogous to the field of urban ecology which has evolved during the last half century. Urban ecology has an inclusive approach as it addresses ecological, social and other aspects of urban landscapes and includes design aspects as well (Sukopp, 1998). In addition, landscape ecology, such as Forman (2008) has been of a great influence on both green urbanism and ecological urbanism. I mean that green urbanism and ecological urbanism are primarily operating within the same field and draws inspiration from urban ecology and landscape ecology. Ecological urbanism and green urbanism take departure in the city in order to encourage sustainability. Sustainability cannot be reached with isolated small scale technical solutions in the form of sustainable architecture and green technologies (Mostafavi, 2010). A broader perspective and an inclusive approach is advocated: *Any effective agenda for confronting global climate change, biodiversity loss and a host of other environmental challenges must necessarily include cities as a key, indeed the key element* (Beatley 2000, p.4).

Green urbanism emerged before ecological urbanism and hence serves as a predecessor to ecological urbanism in many ways, I suggest. In on of the key publications of green urbanism, the book Green Urbanism, Beatley (2010) acknowledges terms like sustainable cities, sustainable communities and sustainable development as being describable of green urbanism. He completes the definition of green urbanism by presenting its vision. A city exemplifies green urbanism if it: strives to live within its ecological limits, is designed to function in ways similar to nature, strives to achieve a circular rather than a linear metabolism, strives toward local and regional self-sufficiency, facilitates more sustainable lifestyles, and emphasizes a high quality of neighborhood and community life (Beatley, 2000). These ideas are similar to the ones presented by ecological urbanism. Ecological urbanism stresses aspects such as social and economical more vividly than green urbanism: *The urban, as the site of complex relations (economic, political, social, and cultural) requires an equally complex range of perspectives and responses that can address both current conditions and future possibilities* (Mostafavi, 2010 p.13). In this sense, ecological urbanism stresses an inclusive approach in a similar way like landscape urbanism. In the context of ecological urbanism this means to include the full spectra of sustainability as well as an interdisciplinary approach and an emphasis on working across scales (Mostafavi, 2010). Hence, ecological urbanism might have a more inclusive agenda than green urbanism which primarily engages in the "green" issues of the sustainability concept.

In conclusion, it is suggested that landscape urbanism, ecological urbanism and green urbanism all draw inspiration from urban ecology and landscape ecology and their way of addressing ecological, social and other aspects of urban landscapes while including the design aspect as well. Landscape urbanism differs from ecological urbanism and green urbanism since its broad and undefined agenda extends beyond issues of sustainable cities. Green urbanism and ecological urbanism both take their departure in the city and aim at developing models to develop sustainable cities. With green urbanism, focus is on ecological aspects whereas ecological urbanism has a more inclusive approach. Ecological urbanism resembles green urbanism when it comes to the ecological aspect of sustainability but extend a bit more beyond the environmental and green aspects of the sustainability aspect than what green urbanism does. I suggest that green urbanism and ecological urbanism stress social issues more than landscape urbanism. Waldheim[1] suggests that ecological urbanism is the result of a development of landscape urbanism in recent years. Hence, ecological urbanism might be regarded as an attempt to widen the approach on social aspects which landscape urbanism at times leaves out.

1 Charles Waldheim on landscape urbanism, lecture in Stockholm 7th October, 2010.

Structure and chapter outlines

The chapter structure bring clarity to how the subject of landscape urbanism methodology is organized in the paper. The result of the paper is organized in three main parts, organized in three chapters. The initial chapter provides an introduction; the second chapter gives a background to landscape urbanism, followed by chapter three which presents the results of my research. The last chapter provides an extraction and analysis of the characteristics and strategies of landscape urbanism methodology with a subsequent discussion on their applicability. However, further conclusions and reflections are integrated in the overall text and are presented throughout the paper.

Chapter two: Understanding landscape urbanism—an overview

The second chapter provides a brief background of the controversy of landscape urbanism and its emergence. This puts landscape urbanism in context. Further the revaluation of the concept of landscape within the landscape urbanism discourse is discussed. The following subchapter, Landschaft in practice: Defining competitions of landscape urbanism, illustrate how the new apprehension of landscape has been interpreted in some of the most renowned projects mentioned within the landscape urbanism discourse. The study of some practical examples completes the understanding of landscape urbanism.

Chapter three: Understanding the methodologies of landscape urbanism—three perspectives

The third chapter presents the findings from my research. The chapter is organized in three subchapters. Each perspective approaches the methodology differently. The subchapters should be read as a complement of each other but could also be read separately. Being read together, they will generate a more coherent image of how the concept of landscape is interpreted and of the nature of landscape urbanism methodology. Being read separately, each chapter will bring some structure and understanding to landscape urbanism methodology from one perspective.

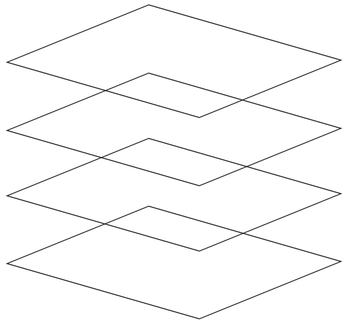
Subchapter One: Ideologies of landscape urbanism

This subchapter takes an ideological perspective as it studies the main ideologies of methodology of landscape urbanism. It provides an orienting characterization and could be seen as an introduction to the other two perspectives. The first chapter gives an ideological approach to the subject and an overview of the two major disciplines of landscape urbanism and their methodology.

Subchapter Two: The concept of landscape as methodology

This subchapter studies how the concept of landscape is interpreted at two different levels. It presents an overview of the nature of methodology within landscape urbanism. A dual meaning of landscape is presented:

Introduction/
chapter outlines



.01 Introduction and Working process

.02 Understanding Landscape Urbanism- an background

.03 Understanding the Methodologies of Landscape Urbanism- Three Perspectives

.04 Understanding the Possibilities of Landscape Urbanism from a methododlogical perspective

landscape as a method/model for thinking and landscape as a method/model for acting.

Subchapter Three: Defining Ideas of Landscape Urbanism and their Methods

This subchapter has a practical perspective as it investigates how the concept of landscape is translated into defining ideas. The interpretation of landscape within the landscape urbanism discourse is elaborated on and is presented with a more practical approach. Two main ideas in the landscape urbanism methodology are presented, Landscape as ecosystem and Landscape as field and surface. These ideas are exemplified with writings of landscape urbanism.

Chapter four: Understanding the possibilities of landscape urbanism from a methodological point of view

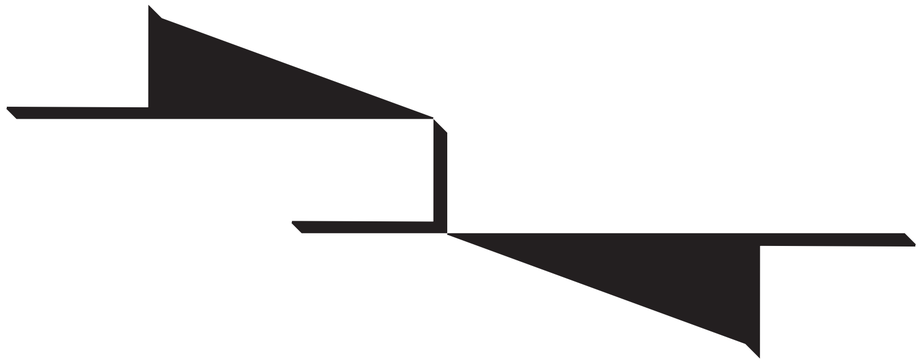
This chapter describes the main characteristics of landscape urbanism methodology regarding working method and strategies. The practical outcome and possibilities of the working methods and the strategies are discussed and reflected upon. The strategies are further contextualized by the setting up of a matrix. The matrix gives an overview of the strategies in relation to the results of the prior chapters of the paper. Hence, the matrix suggests a basis for a conceptual framework regarding landscape urbanism methodology.

Subchapter One: Methodological approaches of landscape urbanism

This subchapter studie the methdodological approaches of landscape urbanism; Approach to site, Learning as a vital part of the design proces, Interdisciplinarity, Representation as tool, Designing systems and strategies as opposed to form are presented.

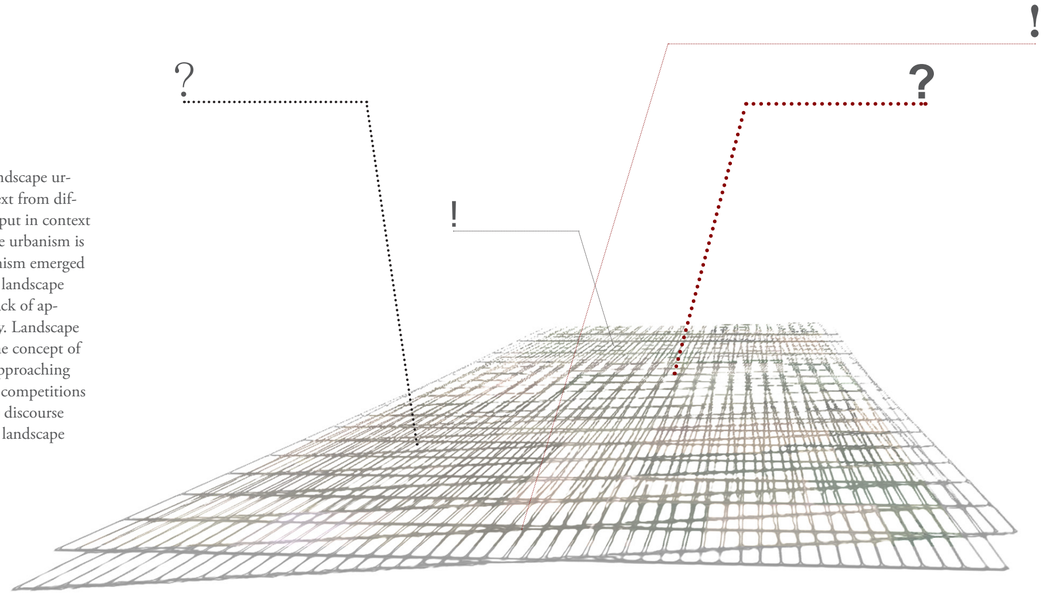
Subchapter Two: Models and strategies of landscape urbanism

This subchapter discusses conceptual models derived from the interpretation of landscape as surface and field an Landscape as ecosystem. Associated stratgies and project examples are presented. A matrix relates the models and strategies to the Defining ideas of landscape urbanism and the metaphorical and operational interpretation of landscape.



CHAPTER TWO/ UNDERSTANDING LANDSCAPE URBANISM- A BACKGROUND

This chapter gives a background to landscape urbanism by putting landscape urbanism in context from different perspectives. First landscape urbanism is put in context in the discourse on urbanism. Further landscape urbanism is put in context historically, why landscape urbanism emerged is discussed. It is studied how the emergence of landscape urbanism partly was generated by a perceived lack of approaches that can address the contemporary city. Landscape urbanisms respond to this lack is to revaluate the concept of landscape. This enables new dynamic ways of approaching and forming the city. The presentation of some competitions that are associated with the landscape urbanism discourse gives an introduction to how the revaluation of landscape can be transferred to form.



A subject for debate.

Landscape urbanism– a subject for debate

Landscape urbanism has for the last decade been a topic for debate among practitioners and theorists ranging across the disciplines involved in forming the contemporary city.

Regarding the geographical focus of the debate, the US stands out. Andersson (2010) notes this and argues that the discourse and controversy surrounding landscape urbanism has not been as evident in Europe as in the US. This is because landscape architects traditionally have been more integrated in large scale planning and holistic approaches in Europe than in the US.

Since landscape urbanism is still much in becoming, the arena for debate has mainly been on conferences, online, in dissertations and in journals rather than in literature. A few journal publications with landscape urbanism as a theme include for example Praxis #4, Kerb #15 and Topos #71. These publications have all discussed landscape urbanism from different perspectives, contributing to a diverse image of the subject. The most recent publications, such as Topos #71 demonstrate how the debate is broadening, with contributions from all over the world. Individual dissertations and papers published in journals like the Landscape Journal and JOLA have further nuanced the subject of landscape urbanism. Additionally, there is a wide range of blogs and online forums that discuss the subject. Such online phenomena are for example Landscape+Urbanism, (http://landscapeandurbanism.blogspot.com/), Random Rants, (http://engkiat.wordpress.com), Arhitectoniki, (http://arhitectoniki.blogspot.com/feeds/posts/default?orderby=updated) and http://www.timstonor.com/ (all accessed on 23rd September 2010). Other blogs represent the educational programs of landscape urbanism, such as Architectural Associations (http://aa-landscape-urbanism.blogspot.com), presenting a more promoting presentation of landscape urbanism.

Advocates market landscape urbanism as a sustainable model for the contemporary city as opposed to critics who claim it is just an abstract collage of old ideas of landscape architecture. It seems that the debate has been circling around three major issues. These issues include whether or not landscape urbanism has a potential for generating form, its abstract texts and pretentious terminology and whether or not the ideas presented by landscape urbanism are new or just old ideas updated to contemporary conditions. A brief overview of the debates with illustrating examples and quotes are listed below.

Rhetoric without substance?

The critique of landscape urbanism regarding its inaccessible character, its dense texts and abstract terminology, have been taken part at a global level. The most vivid example is the web-based Landscape Urbanism Bullshit Generator, (http://www.ruderal.com/bullshit/bullshit.htm<, accessed 12th January, 2011), mocking the pretentious terminology and impreciseness of landscape urbanism.

Landscape urbanism or form?

Susannah C. Drake (2010) means that the description of landscape urbanism by its instigators shows high competence in marketing an idea, but demonstrates a sparse engagement in design. She states that the term landscape urbanism suggests a new way of seeing and defining the urban landscape. Though, she sees a risk that the vague formulations are just resulting in empty words, blandness and anonymity. Drake quotes Corners description of landscape urbanism: *…it marks a productive attitude toward indeterminacy, open-endedness, intermixing and cross-disciplinarity. Unlike the overly simplified view of the city as static composition, with the planner as figure in charge, landscape urbanism views the emergent metropolis as a thick, living mat of accumulated patches and layered systems, with no singular authority or control. Such a dynamic, open-ended matrix can never be operated upon with any certainty as to outcome and effect. It escapes design and even more so planning. The contemporary metropolis is out of control—and this is not a weakness but its strength* (Corner cited in Drake 2010, p.54). Drake asserts that the presentation of landscape urbanism by Corner explains five characteristics as a base for a new form of practice: horizontality, infrastructures, forms of process, techniques and ecology. However, Corner is leaving out the subject of design. Drake consequently suggests that when it comes to form-making, landscape urbanism doesn't offer anything new: *the denial of form-making does not expand beyond McHarg's methods and thus leaves us where we were but within the framework of a much more sophisticated verbal construct* (Drake, 2010 p.54). Corner (2010 p.26) on the other hand claims that landscape urbanism includes both theory and practice: *Landscape urbanism is as much an ideology as it is a mode of practice.* Further, in the Landscape Urbanism Reader, Corner (2006) explains why most projects of landscape urbanism have remained on the drawing board. It is simply because of the clients' lack of visionary thoughts, according to him. In recent years though, projects by offices like Stoss Landscape Urbanism, Hargreaves Associates and Corners Field Operations in the US, Palmbout Urban Landscapes and West 8 in Holland and Turenscape in Beijing among others have demonstrated an engagement in landscape urbanism in theory and practice. Hight means that: *Landscape urbanism ultimately suggests neither a new formalism nor a renewed emphasis on landscape in the city. It is not a theory of design, but promises to innovate at the level of design practice* (Height is cited in Muir 2010, p.7).

A collection of old ideas?

Third, there has been a discussion whether or not landscape urbanism contributes to something new. One of the instigators of landscape urbanism Mohsen Mostafavi (2010, p.32) states that the interdisciplinary and multi-scalar approach of the framework further a new model for sustainability: *The urban, as the site of complex relations (economic, political, social, and cultural), requires an equally complex range of perspectives and responses that can address both current conditions and future possibilities.* According to Mostafavi, landscape urbanism provides this complex range of perspectives. On the contrary, Gary Scott, president for the American Society for Landscape Architects (ASLA) means that landscape architects already engage in questions of landscape urbanism: *It's landscape architecture applied to urban form. The idea of landscape rather than architecture generating urban form began with Frederick Law Olmsted and the current proponents of landscape urbanism seem to have forgotten this* (Scott cited in C. Drake, 2010 p. 54). The quote of Gary Scott demonstrates how landscape architects with a genuine experience of theory and practice have been provoked by landscape urbanism's claim to present a shift of paradigm as stated by Waldheim (2006, p.11): *Landscape urbanism describes a disciplinary realignment currently underway in which landscape replaces architecture as the basic building block of contemporary urbanism.* Muir (2010) declares the importance of acknowledging prior theories of landscape architecture, while building upon the new framework of landscape urbanism. This has a potential to nuance the rhetoric of landscape urbanism and enhance its accessibility, I suggest.

The emergence of landscape urbanism

The debate surrounding landscape urbanism shows the lack of consensus regarding landscape urbanism. One might wonder why landscape urbanism exists at all? A background of the emergence of landscape urbanism might help to bring clarity to this issue. For more details on the emergence, definition and development of landscape urbanism, see From Emergence to Divergence: Modes of Landscape Urbanism by Gray (2006).

Lindholm (2008, p.4) concludes that landscape urbanism is a concept, *an abstraction, a meta-level* (Lindholm, ? p.4). This concept is developed by landscape architects, architects, urban designers and planners for mainly two reasons. First to address the perceived lack of contemporary planning models for understanding the processes changing the urban realm over time. Hight (Muir, 2010 p.7) states that landscape urbanism *has emerged from a perceived crisis in which the traditional disciplines of architecture and urbanism are thought to be incapable of engaging the contemporary built environment. The urban milieu has altered so drastically in the past 50 years that the objects of architectural and urban knowledge – such as the 'city' – no longer exist as objects accessible to those fields*. Lindholm (2008) further means that landscape urbanism emerged in order to counteract the perceived inability to creatively use ecological know-how and thinking in design and planning. Further landscape urbanism sprung from a reaction against the superficiality and politically uninterest of post-modernism. It was also a reaction against the environmental framework that was seen as aesthetically unconscious (Lindholm, 2008).

Gray (2006) means that the emergence of landscape urbanism can further be traced to the theoretical currents of non-linear dynamics, mathematical field theory and computer simulation technology all highlighting relations and interconnectivity as opposed to single objects.

All these ideas on landscape urbanisms emergence demonstrates a striving for a new model to use when approaching the city. As the morphology of the contemporary city has changed, its functions and forces have transformed. The Three Eggs diagram of Cedric Price (Shane, 2006) illustrates this. This change calls for new methods and models for viewing and understanding the city. As the dichotomy of city and country, nature and culture are weakened landscape urbanism suggests a revaluation of landscape as a model to understand the cities of today and tomorrow.

The morphology of the modern city has changed

Revaluating the concept of landscape: a new urban morphology requires a new approach to landscape and urbanism

Since landscape is the model of practice in landscape urbanism, it is necessary to dissect the meaning of landscape in landscape urbanism to evaluate what landscape mean in this context and why it is used as a model to address urban conditions.

James Corner invented the phrase Landscape as Urbanism in a series of conferences in the mid 1990s. Landscape played the leading in these conferences with themes ranging from "constructing landscape" and "recovering landscape". The aim of the conferences was to theorize landscape architecture and to discuss possibilities to move the discipline forward (Gray 2006). This was a starting point for a revaluation and reinterpretation of the concept of landscape.

With the Picturesque, nature was represented by the pastoral scenes of landscape painting, and was regarded as righteous, kind, and comforting. Landscape was in opposition to the morally degenerated city (Corner, 2006). This prior narrow view on landscape as a pastoral scene causes Prominski (2005) to ask: *Can the concept of Arcadian scenes, composed of meadows, hedges, trees and water, be useful in the design of our contemporary landscape which has to address contemporary ele*

ments like infrastructural lines, derelict industrial sites or wind power masts? (Prominski, 2004 p.26). Prominski (2005) presumes that Arcadian landscapes might be relevant at certain places but as an overall model for contemporary urban conditions, the dichotomy of nature and culture and landscape as a frozen image of an ideal state is irrelevant. Corner (1999) means that if landscape is viewed only as a scenographic backdrop to urban life, or as a passive product of culture, it looses its potential as an agent that can produce and enrich culture. This potential is only possible if landscape is revaluated, according to the advocates of landscape urbanism.

Landschaft synthesises nature and culture over time

Corner (1999) means that a revaluation of landscape means a possibility to introduce a model that includes different forces; natural, cultural, economical, social etc. over time, thus discarding the idea of dichotomies. He conceives this model by putting more meaning into the word landscape by referring to the German word landschaft. According to Corner this word can be interpreted in a more functional way than the English landscape, associated with the representational landscape painting and the Picturesque. Landschaft covers relationships not only among the visible, buildings and fields, but also of programs, processes and space (Corner, 1999).

Hence, landschaft doesn't happen by coincidence, it is land shaped and organised by humans with a focus on productivity. It means more than a scenic picture, landschaft isn't nature or wilderness. It happens by the hand and plans of humans (Muir, 2010). Thus natural and cultural forces and processes are intertwined, synthesised and work over time.

Corner (2006) mentions the Los Angeles River as an example of the traditional opposition between nature and culture. The river runs through LA in a concrete channel, mainly in a culvert, in order to handle the spring time flooding and surface runoff. The constructers of the channel, the US Corps of Engineers, viewed nature, here represented by water, as a violent force posing potential threat to the city, hence the channel was constructed. Corner (2006) describes how landscape architects, environmentalists and community groups now want to *convert the channel into a green corridor, replete with riparian habitat, woodland, birdsong and fishermen* (Corner, 2006 p. 25). The aim is to make the river accessible to the inhabitants of Los Angeles. Corner (2006) disregards the will to transform the channel, since this view opposes nature and culture. It keeps the categories of engineering/ city against landscape as separate units. Just as the buildings of a city must be seen as part of the overall landscape, the concrete river channel must be seen as a landscape element because it has a landscape function as a hydrological vessel according to Corner (2006). The example of the Los Angeles

Landscape Urbanism recovers the meaning of landscape from a framed static picture to acting as operational an perforative. James Corner describes the scenic image of the landscape: *Here, landscape is nothing more than an empty sign, a dead event, a deeply aestheticized experience that holds neither portent nor promise of a future* (Corner, 1999, p.156)

River illustrates Corners idea of landschaft as being an active field defined by function and processes; further the example promotes Corners ideas of a synthesis between nature and culture. It also demonstrates his striving for upgrading landscape as an equal to architecture. Traditionally, landscape architecture has been regarded as architecture' s other, just like culture is nature' s other and further the city as landscape' s other. These dichotomies have cemented landscape as everything architecture is not; wild verses ordered and art versus science (Muir, 2010).

The LA River example demonstrates Corners idea of nature and culture and how they relate. Anne Whiston Spirn, a student of Ian McHarg, preceded the ideas of Corner in the 1980s. Her book the Granite Garden: Urban Nature and Human Design was published in 1984. Whiston Spirn recommends the dissolving of the dichotomies of nature and culture, planning and design, rural and urban. Analysing the city, Spirn included McHargs approach while studying natural processes within the city. However, she supplemented McHargs work as she includes the cultural context: *Nature in the city is dogs and cats, rats in the basement, pigeons on the sidewalks, raccoons in culverts, and falcons crouched on skyscrapers. It is the consequence of a complex interaction between the multiple purposes and activities of human beings and other living creatures and of the natural processes that govern the transfer of energy, the framework of air, the erosion of the earth, and the hydrologic cycle? The city is part of nature. Nature is a continuum, with wilderness at one pole and the city at the other* (Spirn cited in Muir, 2010 p.51). In a later book, The Language of Landscape, Spirn developed the model of nature and culture as an integrated whole by arguing for deep structure and deep context. The deep structure of Spirn constitutes the deep structure of the crust of the earth, meaning geologic, hydrologic and bioclimatic processes forming the landscape. Deep context explain how these processes interact with culture through time to shape a site and generate its characteristics (Muir, 2010). The interpretation of Spirn highlights how natural and cultural processes form the city. Thus, the ideas of Spirn precede Corners idea of landscape as landschaft.

Landscape urbanism furthers the synthesis of nature and culture but the rhetoric of Corner risks at times to be quite dogmatic. The LA River example reveals an idea driven approach that risks overlooking social values in favour of policies and ideas, I suggest.

LA River

The concept of landscape as a construct and the possibilities and risks of several interpretations

The interpretation of landscape as landschaft is made possible by the very idea of landscape as a concept. Bach and Clemmensen (2005) refer to Simmel who means that landscape is a concept, constructed in our heads. The idea of landscape as a concept and construct enables landscape urbanism to apply landscape as a model for our physical surroundings. I argue that this in turn enable a broad interpretation of landscape, since a construct can be renegotiated. Bach et. al (2005) mean that the view of Simmel is a prerequisite for the dissolving of dichotomies, to unlock existing urban and landscape elements from their preconceived meaning and reconnect them both visually and procedurally. Giving up the binary thinking of urban-rural would also mean a possibility to include ambiguous elements of the city, impossible to categorize as either urban or rural (Bach et al., 2005).

Landscape as concept, as presented by Simmel, opens up for a wide range of interpretations, which risks causing ambiguousness and confusion. As Palka (1995) concludes, the interpretation of landscape and what it constitutes differs according to practice and background: *Despite their common interest in landscape, artists, writers, planners, landscape architects, and geographers can never share the same definition of the term, nor will they always reach full agreement*

within their own domain. Landscape serves a different purpose for each group, and each profession or discipline is unique in terms of its focus, objectives, scales of analysis, epistemologies, and methodologies. Nevertheless, each would benefit immensely from understanding the others' conception of landscape. The mutual appreciation of how each employs the concept would facilitate the exchange of information at those junctions where interests merge (Palka, 1995 p. 64). The different interpretations of landscape within landscape urbanism will be discussed further in chapter three.

The landscape of landscape urbanism means a shift from the idea of the passive picturesque landscape, defined by the human eye, to the active and operational landscape, used as a model by humans. There is a shift of focus from the idea of passive scenery to activity and process. This shift means a focus on how the landscape functions and how it operates over time rather than what it looks like. But the question on what this means in practice remains. Next, a few defining competitions of landscape urbanism will be presented in order to give an idea of how the ideas of landschaft can be applied in the practical work.

Landschaft in practice: Defining competitions

How can the ideas of landschaft be transferred to form? Along with some key publications of landscape urbanism, such as the anthology Landscape Urbanism Reader (2006) and Landscape Urbanism: A Manual for the Machinic Landscape (2003), certain competitions serve as defining elements of landscape urbanism. These illustrate the shift from landscape as a static image to being more process-oriented as advocated by Corners landschaft (1999). But what does this mean when it comes to design and form?

Prominski (2005) means that the new perspective on landscape, which I mean could be represented by Corners (1999) landschaft, emphasises three issues: uncertainty, processes and relations. Landscape is characterized by both spatiality and temporality; it is subject to unpredictable change governed by the specific site and its context. It is an evolving evolutionary system rather than a static image (Prominski, 2005). These characteristics of landscape are applied on the city, they describe the contemporary city as an evolutionary system. Prominski (2005) means that in order to design these systems, as the projects of landscape urbanism aims to, means dealing with questions of determinacy versus indeterminacy and the question of spatial qualities over time. Additionally, it means dealing with complexity, uniqueness and value conflicts. In short it means providing a systematic framework open for change at the site. Doing this, a shift from designing classical, scenic aesthetics to a relational aesthetics, emphasising the organisation of systems before visual appearance, is made (Prominski, 2004). The competitions mentioned below serve as an introduction on how this ambition is transferred to form.

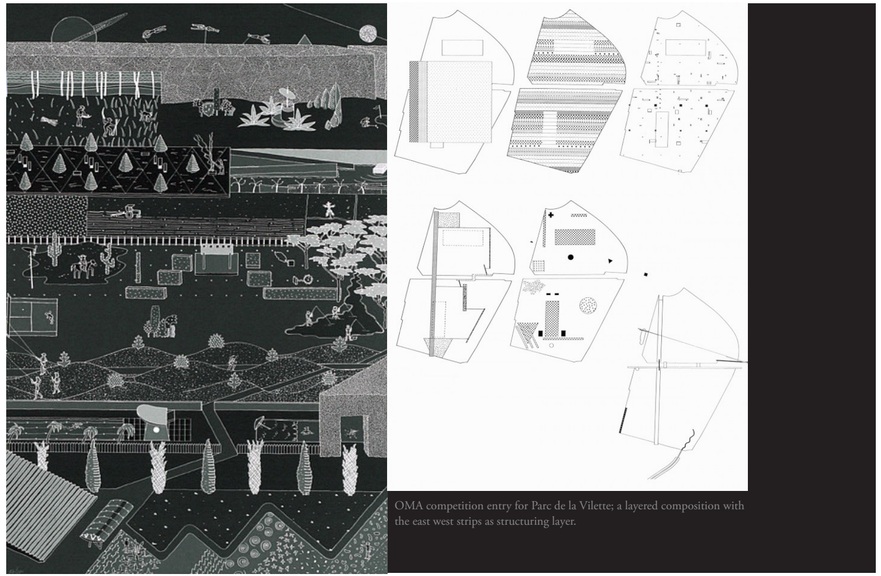
The competitions have acted as catalysts in the discourse of landscape urbanism and thus helped the idea of landscape urbanism to emerge (Gray, 2006). These competitions serve as recurring references for the landscape urbanism discourse, and will consequently be referred to in the coming chapters of this paper.

Parc de la Villette, Paris, 1982

The Parc de la Villette competition is recurrently referred to in landscape urbanism writings such as Waldheim (2006) as well as secondary sources like Bach (2008) and Gray (2006). I suggest that the competition entry of Rem Koolhaas and the Office for Metropolitan Architecture is emphasised in the landscape urbanism discourse mainly because it demonstrates how determinacy versus indeterminacy and the question of spatial qualities over time can be addressed by applying an organizational model inspired by landscape. This subchapter engages in this issue.

The competition entries of Bernard Tschumi (1st entry) and Rem Koolhaas/OMA (2nd entry) were reacting against the dominating post-modernist form-obsession by defining and organising indeterminate program rather than form (Gray, 2006). This would further flexibility which I consider analogous to what landscape urbanism advocates. I propose that the competition entry of OMA best illustrate this, hence the competition entry of Tschumi will be left out in this paper. Gray (2006) informs how OMA had continuously and critically developed the role of program in the making of a project since the 1970s. OMA views program as the engine of the project, determining the outcome of form and organisation and at the same time responding to the changing demands of society. The brief of the la Villette competition asked for a long list of programmatic demands but without specifying where, how, and when different parts of the programs would be developed on the competition site; 121 acres of a prior nineteenth century slaughterhouse complex. The OMA response to the brief and the site was less of a design solution or formal composition. It was more of a strategic organization. The focus was on how the surface of the park could be equipped and staged in order to anticipate and accommodate change in demand and programs (Gray, 2006).

Responding to uncertainty with a landscape inspired approach: In order to respond to indeterminacy the method of OMA was to work with four different layers that organized different parts of the program: The *east-west strips* organised synthetic and natural surfaces, the *confetti-grid* organized large and small service points and kiosks, the different *circulation paths* and the l*arge objects* organized the linear and round forests (Wall, 1999 p.237). The 50-metre wide east-west strips constituted the organising layer; the organisation of the strips is similar to an agricultural organisation of a field. Muir (2010) discusses how the organisation of the east west strips illustrated the possibility of each strip to accom-



OMA competition entry for Parc de la Vilette; a layered composition with the east west strips as structuring layer.

modate different program, contributing to flexibility since each program is independent of its neighbour. Further, the horizontal strips contributed to supplementing modes of experience while moving through the park. Moving perpendicular to the strips, the visitor will encounter the section of all programs. Moving along a strip, a continuous atmosphere is presented. The stable element of the park is illustrated by the natural aspects such as rows of trees and a round forest. The other elements were of a more flexible character as they can be replaced as program and activity change (Muir, 2010). The quality of the project was according to OMA the effect of the associated programs over time: the uses and the juxtapositions of the programs. The OMA entry showed a shift from presenting a fixed design to giving the project and the site a strategy for facing future change: *It is safe to predict that during the life of the park, the program will undergo constant change and adjustment. The more the park works, the more it will be in a perpetual state of revision. Its 'design' should therefore be the proposal of a method that combines architectural specificity with programmatic indeterminacy* (Koolhaas, 1995, p.923). Waldheim (2006) means that landscape was used as a medium through which the organisation of the park could be justified and fulfilled, having the aspect of time and political change in mind.

The entry of OMA proposed a framework for developing flexible uses as needs and desires changed (Wall, 1999). This set a new agenda for contemporary urbanism and landscape urbanism as a hybrid practice in particular. Architects became aware of landscape as relevant *in describing the temporal mutability and horizontal extensively of the contemporary city* (Waldheim, 2006, p 27). The Parc de la Villette competition was the starting point for reassessing the traditional role of the architect and the landscape architect. Architects started showing interest in the field of landscape architecture. Through this shift, the field of ecology and infrastructural approaches, traditionally the domain of the landscape architect, were upgraded in the process of finding a way of observing and operating on urban conditions. A flexible framework that can handle change, mutability and indeterminate processes were emerging (Gray 2006).

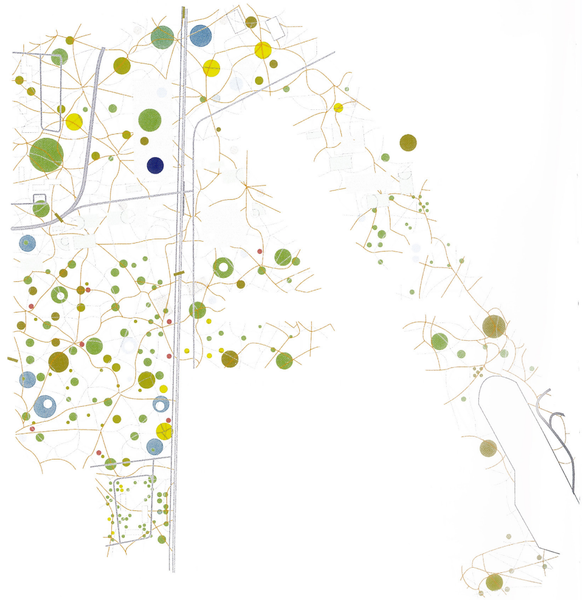
Downsview Park, Toronto, 2000

The Downsview Park competition is recurrently referred to in landscape urbanism writings such as Czerniak and Hargreaves (2007), Waldheim (2006) as well as in secondary sources. I suggest that the competition is emphasised in the landscape urbanism context mainly because it, like the Parc de la Villette entry, illustrates how indeterminacy and flexibility can be achieved. In addition it demonstrates an empha-

sis on modern ecology and the dissolving of the dichotomy of nature and culture. Rather the intertwining of natural and cultural systems was highlighted by working with strategies rather than form. The Downsview Park competition also highlights an interdisciplinary approach and demonstrates how representation can be used to illustrate dynamics over time. These aspects are recurring within landscape urbanism and will be further elaborated on in chapter four.

Seventeen years after la Villette, the international competition for a major city park, Downsview Park, was organized. This time the brief was set in a landscape urbanistic manner as an interdisciplinary project that specifically asked the competitors to design for changes and dynamics over time, considering ecosystem conditions and human use. The site was, as at la Villette, a de-industrial site, a former military base in Toronto, with an indeterminate set of programs. The difference from la Villette however, was the emphasis on landscape as the medium of the project in the brief (Gray, 2006). There was furthermore a focus on ecology as the brief called *for an interpretation of ecology consistent with an adaptive, self-organising, open system* (Anne-Marie Lister cited in Muir 2010, p.55).

Gray (2006) suggests that the Downsview competition showed a new view on the ecological and dynamic landscape forces existent on a site. The entries illustrate how these forces were used as structural elements and as tools for designing and organising the site. The site is positioned on a watershed, which encouraged the competitors to let the hydrology of the site guide the organisation of program. In contrast to the la Villette competition, many of the entries developed ecological strategies as means for organising the site to a much larger extent than in the la Villette competition. In general, the entries emphasized the interweaving of nature and culture, proposing how natural and artificial processes mustn't be a contradiction. However, the design and definite form were lacking in the entries. Instead, guiding strategies and structures were proposed in the form of matrices of interacting programmatical and ecological systems. Another tool to present the proposals was the phased framework plan, expressing dynamics over time by presenting scenarios for the park in 5, 10 and 15 years time (Gray, 2006). The ecological strategies made a clear shift from the ecological-based models proposed by Ian McHarg thirty years prior to the Downsview competition. McHarg also used diagram as a method; he introduced the method of overlays, but excluded the aspect of time and the synthesis of nature and culture in the diagrammatic presentations. Where McHarg proposed models of closed and balanced systems in move towards a climax state, the Downsview competition entries present the interaction between nature, culture, processes and patterns in a more



Tree City/ Bruce Mau.

complex and nuanced way (Gray, 2006). The entry of James Corner and Stan Allen, Emergent Ecologies, illustrates this evolutionary inspired strategy. The concept was based on an operational matrix, displayed in layered diagrams. The proposal showed detailed site sections in order to demonstrate how the site would be affected by the proposal (Muir, 2010).

Designing a process as opposed to form: The representation used in the Downsview park competition like the matrix and the phased framework plan, are both diagrammatic and large-scale in their description of a site, avoiding small-scale design and organisation. The Downsview competition entry of OMA and Bruce Mau, Tree City, indicates this scheme of designing a process and strategy. This winning entry doesn't focus on the intertwining of natural and cultural forces but rather, as the OMA entry for the la Villette competition, on how to design for indeterminacy and flexibility. Gray (2006) discusses how ingredients of the park like groves of tress, water features and meadows were presented, but without specifically addressing their order within the park. As with OMA's la Villette entry, the use of the graphic diagram as the tool for the "non-design" (author's own expression), was applied. Where OMAs La Villette entry proposed strips of landscape to organise the park and its programs, the Tree City entry used circles (Gray, 2006).

The strategy of Tree City proposal was to grow the park through the formula: *Manufacture nature + 1000 pathways + Grow the park + Curate culture + Sacrifice and save + Destination and dispersal = low density metropolitan life* (Koolhaas and Mau cited in Muir, 2010 p.117). In practice this meant the planting of trees and lying out of paths, but had few specifications on ecology or urban conditions (Muir, 2010). Czerniak (2007) suggests that the park was proposed to be 25 percent forest, furthermore supported by meadows, gardens, playing fields and 1000 pathways. Czerniak (2007)means that the dots of the plan were slightly ambiguous; they could be interpreted as pretty much anything. On one hand this allows for flexibility in that they provide a form of organisation and form. She argues that Tree City was *more a formula than a design-a pragmatic response to unknowable political and economic conditions* (Czerniak, 2007 p.232). On the other hand this vague strategy of the winning entry has been followed by a prolonged process. Czerniak (2007, p.235) wonders *how much of the park's current status is a result of the open-ended of a design as a formula*. She claims that the open-ended of the entry might be *difficult to sell by politicians and planners that have a hard time knowing for what they are rallying* (Czerniak, 2007 p.235). I suggest that the "non-design" of the park might be strategic since it leaves a lot open and show a potential for flexibility. It could however cause difficulties in the implementation because of lack of definition and legibility.

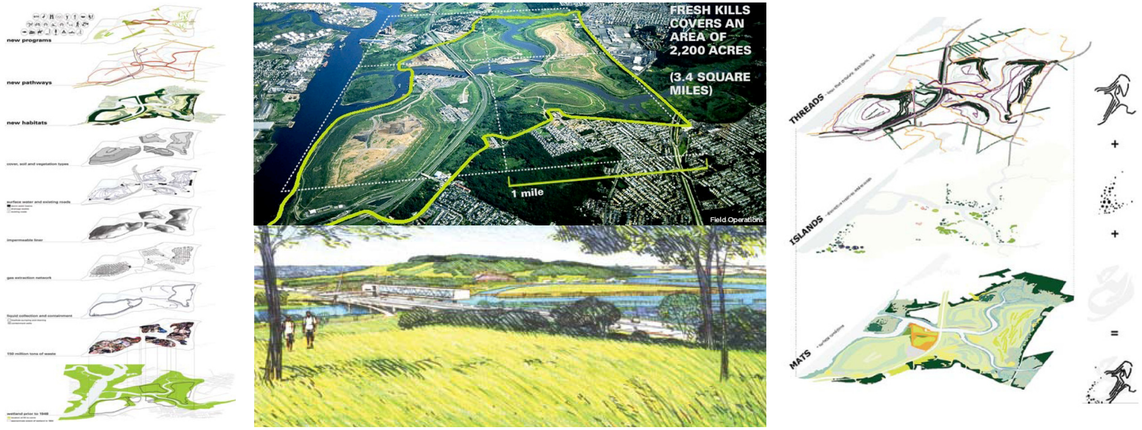
The Downsview competition illustrates an ambition to intertwine natural and cultural systems over time and let the natural conditions of a site guide the design and strategies of a site. This dynamic approach was shown in the representation of the entries. The entries also demonstrate an ambition to design for indeterminacy by designing a process. This process should be able to accommodate change which was most evident in Tree City. Further, Tree City indicates that a diagrammatic approach and working with strategies rather than form might cause problem in the process of implementation. For more information on the Downsview park competition, I refer to Czerniak's Case: Downsview Park Toronto (2002).

Fresh Kills to Landscape, New York, 2001

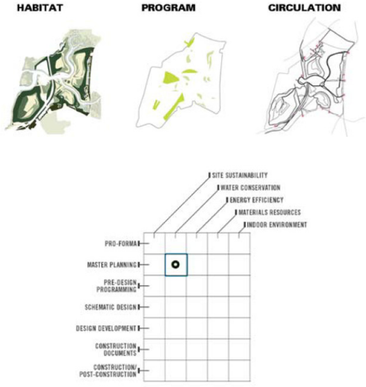
The method of utilizing diagrams as a tool, concept and frame for a project to describe ecological dynamics interacting with human interventions, was widely used and established by the time for another international key completion in the landscape urbanism discourse, the Fresh Kills to landscape competition (Gray, 2006). The Fresh Kills competition is recurrently referred to in landscape urbanism writings such as Czerniak and Hargreaves (2007) as well as in secondary sources. I suggest that the competition is emphasised in the landscape urbanism context mainly because it, like the Downsview competition, illustrates an emphasis on modern ecology, resilience and the dissolving of the dichotomy of nature and culture and how a long term strategy can remediate a polluted site. Working with different kinds of processes and designing strategies and systems were even more highlighted this time.

Designing for resilience by intertwining natural and cultural systems: Czerniak (2007) discusses how the team of Corner developed ideas to further resilience in their 2001 winning entry for Fresh Kills Landfill on Staten Island, New York. The brief set out to transform the 2200 acre site from landfill to landscape. Over forty percent of the area was industrial or vacant land. The plan aimed at a future condition of seventy-five percent of nature, recreation and residential programs on the site. Corner's team developed a layered model, proposing the development of the site over time. Each layer of the model constituted an ecology where each ecology had its own time frame and site-boundary in order to project a long-term plan. The goals of the plans were set up on the basis of the current conditions of the site. Letting time be a part of the plan meant a potential for resilience according to Czerniak (2007). Resilience in ecological terms means the ability of a system to adjust to changing conditions, to adjust while change is occurring, without losing identity or performativity. In the context of a park, Czerniak suggests that the possibilities of resilience is dependent on the parks *ability to accommodate diverse and shifting social, cultural, technological, and political desires while maintaining its identity* (Czerniak 2007, p. 216). Further she means that the potential of programming a park for resilience lies in *in the strategic design of its organizational systems and logics – whether infrastructure, form, or modes of operation – that enables it to absorb and facilitate change yet maintain its design sensibility* (Czerniak 2007, 216).

Muir (2010) discusses that in the context of the Fresh Kills competition, the resilience of the park was solved by the use of a matrix. The matrix proposed a process of re-colonization on the polluted site, where an organisational layer of threads (linear pathways and circulation), mats (surfaces and fields) and islands (clusters and groups) would guarantee access and framework of organic matter, people and programs. These layers and their interrelations were the backbone of the organisation of the park, distributing the programmatic elements. The linear threads organised the flow of matter, including water that enables derelict and ecologically poor areas of the site to be rejuvenated. The groupings of the islands allowed for protected habitats, seed sources



James Corner/Field Operations/ Lifescape, Fresh Kills competition entry
Spatial framework: layering of three new systems onto existing site systems.



James Corner/Field Operations, Lifescape, Fresh Kills competition proposal,
diagram showing systems of threads, islands, and mats.
Schematic design diagram showing systems of habitat, program, and circulation.

and program activities. The surface mats constituted a patchwork of porous surfaces that cover the ground providing erosion control and native habitat. The different elements of the matrix, the threads, mats, islands and surfaces, would in time develop to a self-sustaining flexible system that would be able to absorb change and transform as demands are changed. The elements; threads, mats and islands would act as a framework, providing an identity and function of the site while at the same time function and perform on the ecological level. I propose that the matrix of Corners team not only illustrates a potential for resilience, but also how natural and cultural systems, like infrastructural development and animal habitats could function and interact within a site. The phasing of the proposal was set out for thirty years, divided in three phases. The first phase was labelled seeding meaning public access to safe areas of the site, the restoration of native habitat and the development of recreational facilities for the neighbouring area. The second phase secured the overall infrastructural development of the site, including such as road system, utilities, plantings and other structures. The third phase included site programming. Corners team supposed that the programming of the site would likely change over time as demography and demands change. Hence, the programming was presented as a long-term adaptability plan which would enable the site programming to evolve as the site and communities change. As a supplement to the phased plan of the proposal, a communication campaign was presented aiming at upgrading the area from the public notion of a landfill to a valuable park. This strategy enhanced

the meaning of public engagement in the site in order to make the park successful (Muir, 2010).

Corners team aimed at making the proposal more as a working plan, a design of a process, as opposed to a finished master plan, allowing for ecological and social forces and processes uncontrollable of the designer, to condition the park: *It's not an exercise of trying to design a fantastic park; it's an exercise of trying to design a method to get from what it is now to something that is green, public, and safe. And that process would then produce a park that had very unique spatial and aesthetic experiences and properties* (Corner cited in Muir, 2010 p.66). Thus, Corners team designed the framework for the park, which is its ecological and social resilience, allowing for possible scenarios of experience, aesthetic qualities, and ecological conditions (Muir, 2010).

Waldheim means that the quality of both the Downsview and Fresh Kills competitions of Corner and Allen are their ability to combine social, natural, cultural and infrastructural layers of the site and its surroundings: *Particularly compelling is the complex interweaving of natural ecologies with the social, cultural, and infrastructural layers of the contemporary city* (Waldheim cited in Gustavsson p. 34). Waldheim means that this model of intertwining and integrating natural and artificial layers of a site is significant for landscape urbanism. By using the natural systems of the city and their functions as a foundation for a proposal, all superficial references to sustainability are rejected. Hence, the final proposal demonstrates an understanding of the natural systems of the site and their importance as part of the city (Gustavsson p.34).

Defining competitions- discussion

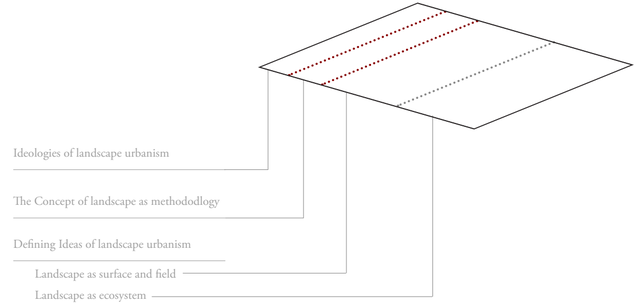
Designing a framework that focuses on program rather than form, and process rather than a static state in order to reach a flexible solution are methods characteristic to landscape urbanism, I suggest. I propose that the Corner entry of the Fresh Kills competition most vividly illustrates this. The strategies are most developed in practice of all the competitions mentioned. The entry illustrates landscape urbanisms response to how the idea of landschaft is applied on a site and how it is transferred to form.

Landscape urbanism proposes that the design of frameworks, systems and strategies can include natural and cultural systems over time by being flexible in their design. Hence, the design becomes an evolving evolutionary system rather than a static image. Setting up this kind of systems and frameworks, an infrastructure or a guide for growth, instead of a fixed plan, is different than the conventional planning or design approach. It is a new way of thinking of environmental design, and a new method for developing strategies that can accommodate the indeterminate processes of contemporary urban conditions. Muir (2010 p.134) suggests that: *landscape urbanism is intended to make us think and imagine how design and planning can work in ways we are not used to, across scales we have trouble conceiving. This is not to say that how does not matter, how does matter, but we have to imagine what before we can figure out how, and landscape urbanism helps us imagine this. Most importantly are the possibilities this sort of thinking allows, which can lead to solutions foreign to our traditional imaginative strategies.* To evoke a new thinking and a new perspective on design has in itself a great potential, I argue. The Fresh Kills entry of Corner suggests how it can be achieved. Further, some of the projects mentioned above, do engage in the subject of form and design, but rather by presenting diagrammatically and large scale formalistic expressions like Tree City or the east west strips in The OMA entry for Parc de la Villette. The Downsview competition indicates a fundamental hallmark of landscape urbanism, namely how graphics, form, dynamics, presentation and methodology can be combined in order to understand, design and communicate a proposal. This is however quite a defensive way of designing which leaves the question of how is the graphic diagram is turned into something more than a masterplan unanswered.

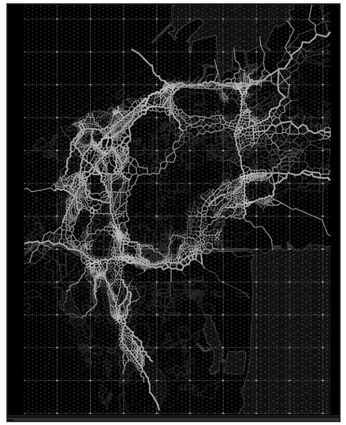
In conclusion, the first chapter gives a background and an understanding of landscape urbanism. The debate surrounding landscape urbanism illustrates that landscape urbanism is questioned. There is no consensus on the subject of landscape urbanism within the discourse on urbanism. The debate on landscape urbanism partly focuses on landscape urbanisms incapability to generate form and new methods which this paper sets out to investigate further. It is further discussed that the emergence of landscape urbanism is partly due to a perceived lack of models and methods to apply on the contemporary dynamic urban realm. The revaluation of the concept of landscape as landschaft enables a new model that can incorporate natural and cultural processes over time. In practice this puts an emphasis on the design of systems rather than form. The competitions give an introduction to how a design of a framework and the design of strategies and process are favoured in order to deal with questions of indeterminacy and complexity.

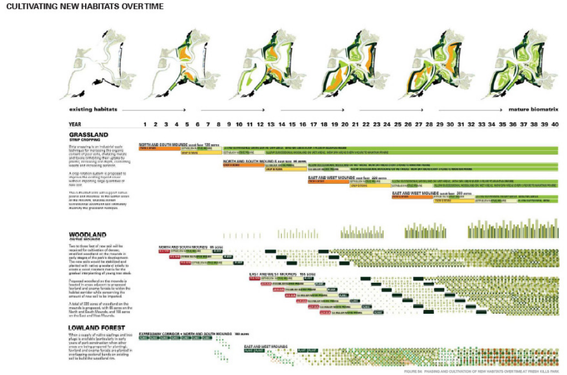
CHAPTER THREE/ UNDERSTANDING THE INTERPRETATIONS OF LANDSCAPE WITHIN LANDSCAPE URBANISM- THREE PERSPECTIVES

The interpretation of landscape/ introduction



The first chapter gave an idea of how the revaluation of landscape means landschaft in a landscape urbanism context. This puts emphasis on process, indeterminacy and how these aspects can be integrated in a framework, as illustrated by the competitions. This chapter elaborates further on these aspects and on how the revaluation of landscape as landschaft opens up for several interpretations of the landscape. Three different perspectives on how landscape is interpreted is given. First Ideologies of Landscape Urbanism, second The concept of Landscape as Methododlogy and third Defining Ideas of Landscape Urbanism.





The Machinic mode, image from AA's homepage. Field Operations, diagram from Corner's Fresh Kills entry.

Perspective One: Ideologies of landscape urbanism

Landscape urbanism has a broad approach on the urban agenda. Gray (2006) suggests that the broad approach of landscape urbanism means a variety within the landscape urbanism framework. What unites landscape urbanism is the way in which the contemporary city is viewed through the landscape lens. Landscape is used as an analytical tool when analysing the urban realm (Gray, 2006). However, since landscape is interpreted differently, therefore, this tool will be different. This means different methods and approaches to design. Gray (2006) consider there to be two dominant modes of landscape urbanism; the Machinic mode and Field operations which I mean differ in their interpretation of landscape and their approach to form. Gray (2006) proposes that the Machinic mode strives to design infrastructural systems, architectural form and green structures through the abstraction of natural systems and forces. Field operations aims at operating in the space between buildings to design systems with less emphasis on form. Key is to analyze forces working in the landscape and to work with these forces in order to operate on them to generate ecological and programmatical processes (Gray, 2006). Since the Machinic mode, mainly represented by the Architectural Association (AA), is focusing on architecture I will, as a landscape architect student, focus on the Field operations mode in this paper. First a brief introduction to the Machinic mode.

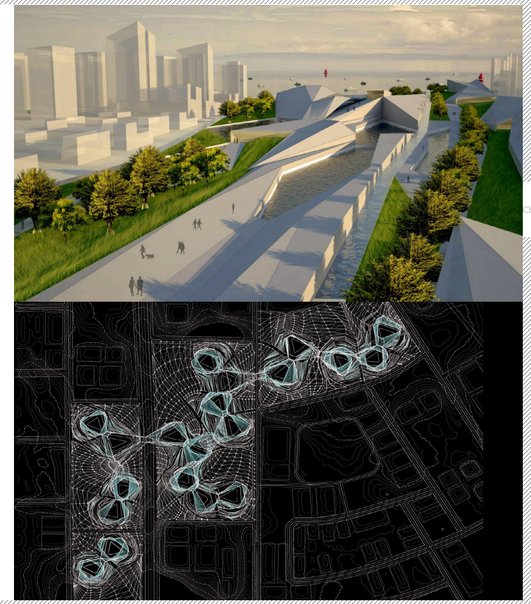
The interpretation of landscape/ machinic mode

Machinic mode

The aim of the Machinic mode is to create form by using identified forces in the landscape to feed an abstract mechanism that creates architectural form. This abstract medium, the Machinic medium, can manage the various aspects of an urban project. These aspects include organisation over scale and disciplines, considering their interrelationships, processes and forces. The machine mustn't just receive the information but eventually produce organisations, protocol, materiality suggestions and fine scale detailing. Hence, the subsequent organisation of the project and its final end form derives from the site, by way of the machine. The Machinic mode could be said to be a filter that not only receives and manages information, but also generates organisation and form. In reality this Machinic medium often means the synthesis of data through a computer program. The computer program is fed information from the analysis made on site and produces diagrams through which form is derived. The computer programs are thus the transfer from the forces identified in the landscape analysis to built form (Gray, 2006).

The process and output is called organisation within the Machinic mode, but according to Gray (2006) the end product is nothing more than static end form. He means that this contradicts the shift of landscape as being operative and not representational, since the end product is a frozen formally presented form.

Images from AALU's (Architectural Association Landscape Urbanism) webpage.



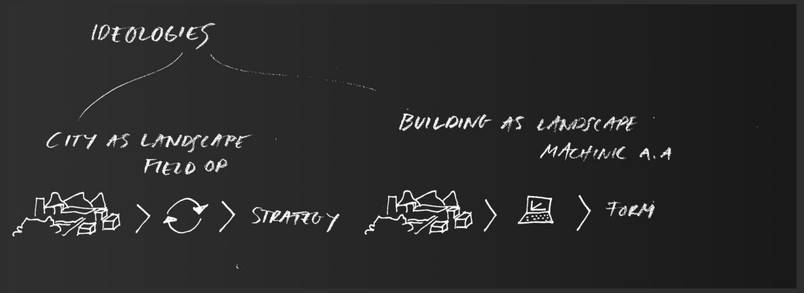
Muir (2010) means that the Machinic mode creates a product in the shape of a building responding to the conditions of a site at a frozen moment in time. However, it doesn't provide a dynamic framework for future possible scenarios like in the Field operations mode, such as the Fresh Kills competition. Gray (2006) means that the Machinic mode is ambiguous in its aim to tackle the entire urban scene through the use of the machine. He finds unanswered questions concerning the machine: *Does the machine emerge from the landscape, or does the cyborgian designer apply Machinic systems to the landscape?* (Gray, 2006 p. 59). Muir (2010) supposes that the method proposed by the Machinic mode seems to be dependent on computer modelling, the machine, in order to develop strategies for a site. Hence, the Machinic mode doesn't engage directly with ecological processes by including them in the design, but rather use ecological theory as a model to illustrate connectivity, open-endedness and indeterminacy (Muir, 2010).

Field operations

The method of the Machinic mode requires the analysis of forces in the landscape which will feed an abstract mechanism who will then generate form. In the Field operations mode, forces operating at a certain site are identified, as in the Machinic mode. The next step is to consider if and how the analysed forces can be modified. The designer will act by "operating" on the forces. These operations will then start up indeterminate processes that will lead to an ecological or programmatically rehabilitation of the site. In opposition to the Machinic mode, the ecological processes of a site are operated on and included in the practical design, not just as metaphors or instigators. Focus is not on static end form but rather on processes (Gray, 2006). The field is analysed and mapped, resulting in an array of dynamic infrastructural conditions of social and ecological character. The aim is to design a site which is contextual, often resulting in a successional and process-oriented master plan as demonstrated in the Downsview and Fresh Kills competitions. Diagrams of phasing, natural and cultural habitats, planting and hydrological systems are used in order to illustrate complex interrelationships between site conditions and the processes working there (Muir, 2010).

According to Gray (2006), it is in this way that landscape urbanism as a field operation should be understood; as an active designed landscape beyond the scenic, a landscape as a catalyst strucure. Muir (2010 p.75) agrees and argues that the Field operations mode seems to be *an evolutionary extension of landscape architecture wherein the nature/culture and planning/design schisms that have historically plagued landscape architecture are beginning to dissolve.* This illustrates the synthesis of dichotomies which is characteristic to landscape urbanism.

The Machinic mode and Field Operations interprets landscape differently, hence their methods and outcome are different.
In the Machinic mode, landscape becomes a part of a form-generating process by contributing with data which is feed to a computer



Field operations views the city as a complex landscape with an abundance of parallell processes. The designer identifies forces and processes at a site and works with these by orchestrating them in the form of a stratgy. Focus is not primarily on form as an end result, but rather to further the hybridisation of different systems . In the Machinic mode the data from the landscape analysis is fed to an abstract mechasnism in the form of a computer program that generates form.

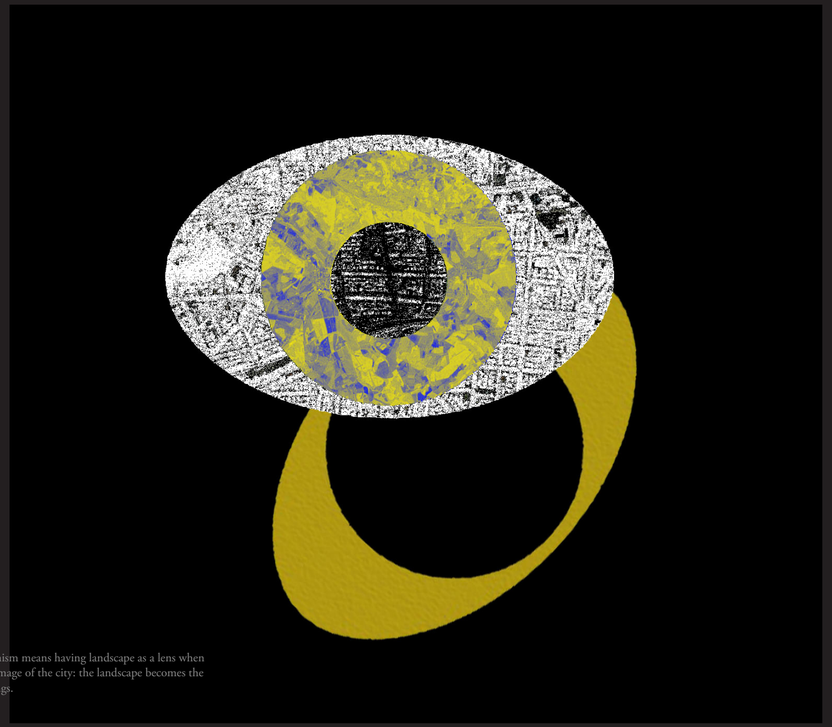
program. Field Operations has a more dynamic approach to landscape; form and process affect each other over time. What unites them is to use the site analysis as a point of departure for the design. The Machinic mode settles with the design of objects, whereas Field Operations works with a vaster perspective and looks ahead by designing a process. Whereas the Machinic mode is sensitive to a smallest change that can ruin the design, the Field operations mode include and foresees these changes and incorporates them in the design. The Machinic mode means a more shallow idea and interpretation of landscape. It is rather used as a means for creating architecture whereas Field operations stresses the integration of landscape and its processes over time.

Perspective Two: The concept of landscape as methododlogy

The paper has so far studied how the revaluation of landscape within landscape urbanism means landschaft. This revaluation has generated two ideologies or main orientations of landscape urbanism that interpret the landscape differently. It is also studied how the interpretation of landscape is complex, as discussed by Simmel in Bach et.al (2005). This complexity is further elaborated on in this chapter, where it is argued that the interpretation of landscape takes place at two major levels within landscape urbanism, operationally and metaphorically.

For many, across a range of disciplines, landscape has become both the lens through which the contemporary city is represented and the medium through which it is constructed (Waldheim, 2006 p.11)

Increasingly, landscape is emerging as a model for urbanism. Landscape has traditionally been defined as the art of organizing horizontal surfaces. It bears an obvious relationship to the extended field of the contemporary city, and also to the newly emerging interest in topological surface. By paying careful attention to these surface conditions-not only configuration, but also materiality and performance-designers can activate space and produce urban effects without the weighty apparatus of traditional space making (Allen, 1997, p.24). As seen in the quotes of Charles Waldheim and Stan Allen, landscape is characterized as the lens through which contemporary urban contexts should be viewed, and also as the medium through which the contemporary city should be constructed. A dual interpretation of landscape is presented: landscape as a method/model for thinking and landscape as a method/model for acting. Landscape is thus interpreted at two levels, in practice and in theory. The idea of landschaft means to see landscape as active and able to synthesise different processes over time. First, this revaluation of landscape is used to describe and



The metaphorical mode of landscape urbanism means having landscape as a lens when approaching the city. The lens inverts the image of the city: the landscape becomes the structuring element rather than the buildings.

The interpretation of landscape/ the concept of landscape as methodology

envision the contemporary city. This means a metaphorical and symbolical ideal of how to approach the city, through the lens of landscape, as advocated by Waldheim (2006). Second, the revaluation of landscape also means to see the dynamic abilities of landscape acts as a model for design. Methods and strategies that can address and further the dynamic conditions are encouraged. This interpretation is more practically oriented and could be illustrated by strategies that incorporate natural and cultural processes over time, as shown in the Corner entry for the Fresh Kills competition. In chapter four, the metaphorical and operational interpretations of landscape in relation to models, strategies and projects are further elaborated on.

These two levels of the interpretations of landscape is also supported by Waldheim[1]. He concludes that landscape acts as a model and metaphor for design but it is also instrumental, working as an applic[2]., semi-scientific science. I choose to organise the levels of interpretation in two levels, the metaphorical and operational levels.

Metaphorical level

The surface and ecosystem of the landscape act as instruments for conceptualizing and analysing the contemporary city in the metaphorical mode. This mode expresses *the lens through which the contemporary city is represented* (Waldheim, 2006 p.11). This means a focus on contextualization and thinking holistically. It offers a method of thinking as the contemporary city is analysed. Gray (2006) means, that a hallmark of landscape urbanism is the understanding of ecological systems and the knowing of the processes that constitutes them (Gray, 2006). I advocate that the emphasis on these dynamic models and the way they can be applied on abstract factors such as the flows of programme over time, constitute the core of the metaphorical mode. The metaphorical mode is abstract and quite vague, the concept of landscape functions as a theoretical model is explained. The metaphorical interpretation of landscape interprets landscape as complex, integrating different processes while being able to accommodate change over time. These characteristics are desirable at a metaphorical level for a project. The operational level focuses on how these characteristics of the landscape can be transferred to practice. How can a project be given the same characteristics and functions like the landscape?

2 Charles Waldheim on landscape urbanism, lecture in Stockholm 7th October, 2010.

Operational level

The metaphorical mode is engaged in a metaphorical conceptualization of the city through the lens of the landscape. In the operational mode, the landscape is working as a manual for urban actions, or even the machine, the operational force. It is the model for acting in the laying out of urban infrastructure; park, streets and buildings. The landscape with its functions and processes is used not as an aesthetic model, but as a point of departure, as a defining structure, when the contemporary city is being modified. To know the processes of the landscape and to apply them contextually in practice is a key factor. To know the concepts of these dynamic models and to apply them in practice is the core of the operational mode. Allen (1997, p.14) challenges the designer by stating: *By paying careful attention to these surface conditions-not only configuration, but also materiality and performance-designers can activate space and produce urban effects.* Bach et. al (2005) mean that Allen's operational use of the landscape provides a model for urban design and the organisation of urban processes. This will be studied in the subchapter Landscape as surface and field.

Perspective Three: Two defining ideas of landscape urbanism

The revaluation of landscape as landschaft within landscape urbanism emphasises for example flexibility, process and the design of systems as opposed to form. In this chapter it will be further studied how landscape is interpreted within landscape urbanism. From where are the desirable characteristics like flexibility, process and framework derived? This chapter suggests that these characteristics are drawn from the interpretation of landscape as surface and field as well as ecosystem. Landscape ecologist Richard T.T Forman labels landscape as: *a mosaic where the mix of local ecosystems or land uses is repeated in similar form over a kilometres-wide area […] Thus, a repeated cluster of spatial elements characterizes a landscape* (Forman cited in Doherty, 2006 p.12). This quote defines how both the horizontality of landscape as surface and the dynamic ecosystems of landscape as ecosystem complement each other in composing the landscape. I suggest that this relation is valid for the relation between the defining ideas of the landscape urbanism methodology. This interpretation of landscape as surface and ecosystem is significant for landscape urbanism. This chapter studies this interpretation further and investigates what the interpretations hold on a metaphorical and operational level.

Landscape as surface and landscape as ecosystem both take departure in the dynamic city and aims at developing operational strategies to address it. Emphasis is therefore on flexibility, frameworks that can incorporate change, synthesis and process. Landscape as surface and landscape as ecosystem articulate the same characteristics and principles and thus aims at developing methods than can fulfil these characteristics. The interpretations of landscape however are different, which means different models and strategies. These strategies will be further elaborated on in chapter four.

A mosaic where the mix of local ecosystems or land uses is repeated in similar form over a kilometres-wide area […] Thus, a repeated cluster of spatial elements characterizes a landscape
(Forman cited in Doherty, 2006 p.12).

The landscape as surface and field

A recurring expression in the landscape urbanism discourse is the idea of landscape as a surface and field: *This emergent discipline … entails a shift in emphasis from the figure-ground composition of urban fabric towards conceiving the urban surface as a generative field that facilitates and organizes dynamic relations between the conditions it hosts. This addresses in particular the interactions between the built environment – with articulated surfaces as its medium – and the subject, both individually and collectively* (Michael Hensel cited in Muir 2010, p.8). The quote illustrates how landscape urbanism advocates a shift of focus from singular objects to the holistic greater scope of the field. In this context, the emphasis is not only on the surface in between the buildings, but at the urban surface like a connective tissue that activates programs and stages events. The field and the buildings are not considered separate but as part of a bigger whole. The surface, the field, is more than a green space; it is the ground surface, the supporting structure of the city and its surroundings. According to Wall (1999), a successful urban surface also predict and foresees events in order to change in a dynamic way as demands and conditions change.

The interpretation of landscape/ landscape as surface and field

The idea of landscape as a surface emerged among architects and theorists in the mid to late 1990s. A shift from object to field refers to mathematical field theory, non-linear dynamics and computer simulations of evolutionary change as well as the shift from analogue object to digital field. The infrastructural components of the contemporary city, linked together in open-ended networks, offer an example of a field condition in the urban context. Viewing the city as a horizontal field was seen as a more efficient flexible model of analysing the contemporary city than using the conventional rigid models of city planning (Gray, 2006). The idea of the surface included the understanding of the performative aspects of the surface in a landscape architectural manner where: slope, hardness or softness, permeability, depth, or soil chemistry are all variables that influence the behaviour of surfaces … from the tendency to shed or hold water to the ability to support traffic, events, or plant life (Wall, 1999 p.24).

The surface of the landscape with its wide range of variety concerning and laconcerning materiality, program and organisation is seen as a valid model for contemporary urban conditions within landscape urbanism. This includes the idea of what I call the inverted landscape where there is a shift of focus from the built to the landscape as a structuring element when approaching the city. Bach et al. (2005) concludes that this view changes the conventional hierarchy of landscape and buildings, as well as it means a model which also consider time and process as an important aspect when planning the. The following chapter of the paper will investigate the idea of the landscape as surface and field further. A few influential writings that address the idea of landscape as surface and field have been selected to be reflected upon. The ideas and methods are organised by instigator in a chronological order in order to illustrate how the ideas of landscape as surface and field have evolved over time.

Preceding ideas of Stanford Kwinter: spatial and temporal non-linearity

Sanford Kwinter became a spokesperson for landscape as a medium and operating method before the term landscape urbanism was coined. Kwinters interpretations of landscape introduce the idea of process and non-linearity including space and time as opposed to the preceding linear Cartesian model. Kwinter uses an interdisciplinary approach to show how new forms and methods can emerge. He is illustrating how form can be generated by the dynamics of self-aggregating larvae, christallic models and geological fault models showing the emergence of surface patterns. Worth mentioning is that Kwinter mainly addresses nature in his model for new form. Landscape is introduced as surface (Gray 2006).

Kwinter didn't consider landscape as a mode of thinking until he coined the term landscapism and soft urbanism in the 1990s, preceding landscape urbanism. Kwinter describes soft urbanism as a: *liquid urbanism of grazing, perpetually interacting forces, an urbanism where forces are allowed to interact...[it] is a dynamic, flexible, ad hoc, rule based urbanism free of the controlling obsession with certainty, predictability, or permanence* (Kwinter cited in Gray, 2006 p.15). This shows how Kwinter was inspired by the surface of landscape and its dynamics when describing the soft urbanism. The early writings of Kwinter were an obvious catalyst and influence for the emergence of landscape urbanism in general and the interpretation of landscape as surface and field in particular.

Stan Allen's Field conditions

Additional defining writings that discuss the idea of the surface or field are written by Stan Allen and Alex Wall. The writings of these two theorists and practitioners have set the tone for the comprehension of the landscape as horizontal field organising the city and its objects within, in contrary to landscape as the traditional pictorial image (Gray, 2006). I suggest that this reflection on landscape is analogous to the revaluation of landscape as landschaft (Corner, 1999). Allen defines field conditions as: *Any formal or spatial matrix capable of unifying diverse elements while respecting the identity of each. Field configurations are loosely bundled aggregates characterised by porosity and local interconnectivity. The internal regulations of the parts are decisive; overall shape and extent are highly fluid. Field conditions are bottom-up phenomena: defined not by overarching geometrical schemas but by intricate local connections. Form matters, but not so much the form of things as the form between things* (Stan Allen, 1997 p.24).
The field conditions, capture some characteristic ideas of landscape urbanisms interpretation of landscape as surface: the resistance toward top-down planning, the interrelations of a system rather than a final form and the prospect of unforeseen events within a large organising model. Allen says that *field conditions cannot claim (nor does it intend to claim) to produce a systematic theory of architectural form and composition* (Allen, 1997, p. 24). Yet Allen presents several concepts that could be interpreted as methods for generating form. These will be studied more thoroughly later in this subchapter of the paper.

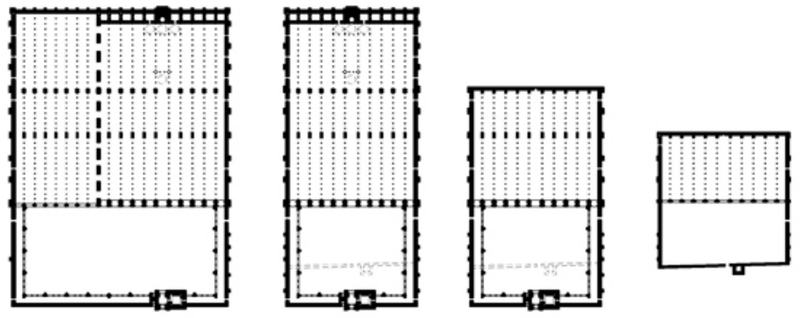
From Object to Field- addressing the contemporary city with a framework: According to Allen (1997), the field is about forces and not material. The field is comprehended as an abstract immaterial phenomenon and thus a metaphorical interpretation of landscape. The field of the landscape is interpreted as a horizontal plane on which programs and events are played out, connecting the field to landscape and urbanism. Allen (1997) means that the field is endless which reveals the problem of controlling its limits. However, by establishing a framework, wherein processes can take place, a new form of urbanism can emerge. The design of the organisational frameworks of the competitions mentioned above, like the east west strips of the Parc de la Villette competition, could illustrate this idea.

Illustrating the idea of the framework with working methods of post-minimalist artists and the Cordoba Mosque: Allen (2000) chooses to illustrate the idea of a framework with the working methods of post- minimalist artists and with the Mosque of Cordoba. In contrast to traditional artists, who exercises a strict control over the limitations and formal constructional aspects of their work (like a conventional architect), post-minimalist artists like Bruce Nauman, Lynda Benglis, Robert Smithson and Barry Le Va use material that are scattered randomly or flow all over the floor. Their working method is to establish loose sets of control over the process of scattering or spreading by for example the choice of material (Allen, 2000). This method reveals the emphasis on local relations over unitary form and the introduction of chance as a component in the project. This responds to the idea of uncertainty and contingency. The artists' material choices, such as working with wire mesh, poured latex or flour, make the outcome uncertain, opening up for effects of chance. But, by the choice of material, the artists establish the conditions, and in some cases direct the flow of the material (Allen, 1997). This working method illustrates a shift of focus from the formal description of a project (like material) to the emphasis on the operations of making a project (how the material behave).

According to Allen the artists *work through distribution, following the logic of the field* (Allen, 2000 p.8). Allen means that the contemporary city behaves in the same way as the post minimalist artists conceive form: *open to action and manipulation, yet coherent enough to support difference and transformation* (Allen, 2000, p.8). Thus, the city is too dynamic to be controlled by traditional stylistic models aiming at static form. Allen (1997) resists the traditional idea of generating form by organising elements into a geometric whole by the use of systems that describe ideal proportions. Allen disregards Albert's axiom that *beauty is the consonance of the parts such that nothing can be added or taken away* (Alberti cited in Allen 1997, p.24). This axiom expresses an ideal geometric system of unity where not only the proportions of the individual elements but also the relationship between individual elements are set. These formal solutions and methods of generating form are regarded highly inflexible, since a

slight unforeseen change might ruin the perfect geometrical composition, according to Allen (1997).

Allen (1997) mentions the mosque in Cordoba, Spain, as an opposite example to inflexible formal solutions. The Cordoba mosque illustrates a strategy of a non-hierarchical and flexible architecture. The mosque was constructed over a span of nearly eight centuries but has kept its original type-form in spite of modifications over the years. Rafael Moneo articulates this: *I do not believe that the Cordoba Mosque has been destroyed by all these modifications. Rather, I think that the fact that the mosque continues to be itself in face of all these interventions as a tribute to its own integrity* (Moneo cited in Allen, 1997 p.25). The mosque was initially given a clearly established type-form with an enclosed forecourt flanked by a minaret tower, opening to a covered space for worship. Subsequently, ten structural walls perpendicular to the prayer wall was erected. As the viewer moves throughout the field, parallax effects are generated. (Parallax is when an object appears to change its position because the person or instrument observing it has changed their position). This gives way to a non-directional space, a serial order of *one thing after another* (Allen, 1997 p.25). Allen (1997) suggests that the characteristic of the Mosque and the experience of it were able to be kept all through the subsequent changes and additions because



Lynda Benglis (left). The modular framework of the Cordoba mosque

the local relationships of the elements remained fixed when the typological structure was repeated. Thus, the same effect, the parallax effect, remained because the relations of part to part remained identical and thus the identity remained. Allen (1997) sees this as a framework where independent elements are additively combined to form an indeterminate whole. Further he says: *The local syntax is fixed, but there is no overarching geometric scaffolding. Parts are not fragments of wholes, but simply parts. Unlike the idea of closed unity enforced in Western classical architecture, the structure can be added to without substantial transformation. Field configurations are inherently expandable; the possibility of incremental growth is anticipated in the mathematical relations to the parts* (Allen, 1997 p.25).

Allen (1997) resembles the elements of the Cordoba Mosque with flexible field configurations. The additions did not mean morphological transformations as with the St Peters Cathedral, where transformations elaborated the basic inflexible geometric schema. Hence, the structure of the Cordoba Mosque demonstrates flexibility.

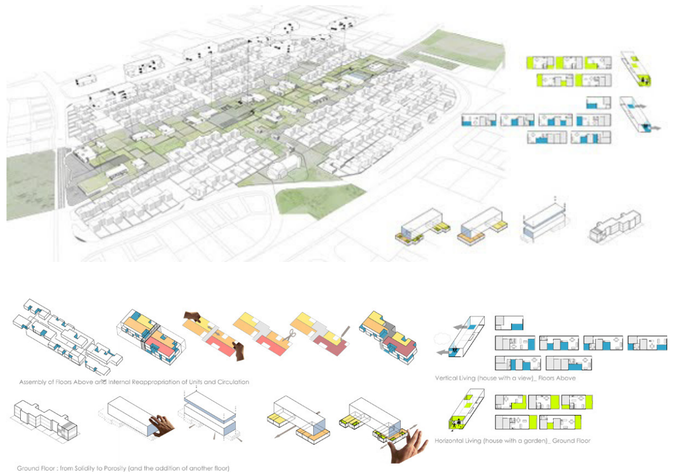
With the example of the Cordoba Mosque, Allen (1997) further illustrates how local relationships are more important than the overall form. The overall formal configuration is left out and the disarticulation of control is stressed. In the Cordoba Mosque, little attention was given to the exterior form. Instead the focus was on the measure and interval of the individual elements. The individual elements and their interrelations condition the form of the whole. I suggest this illustrate the idea of a *bottom-up phenomena* that Allen mentions when he talks about Field conditions (Stan Allen, 1997 p.24). By being attentive to the conditions that determine the connection of one part to another, it becomes possible to imagine a flexible architecture, sensible to local context and still remaining overall stability, according to Allen (1997). I suggest that the Parc de la Villette entry of OMA could be categorized in the same category as the Cordoba Mosque. They both have a flexible structure that can be mutated without losing their identities.

Field strategies, Allen's idea of frameworks: Allen ideas of bottom-up phenomena, flexibility and the interrelations of parts rather than the overall form are derived from the interpretation of the landscape as surface and field. The landscape surface is viewed as a connective tissue where each part interrelates. He illustrates these characteristics with the example of the Cordoba Mosque and the working methods of the post-minimalist artists. In addition he exemplifies these ideas with field strategies, which I regard aim at illustrating an idea of how to compose a framework that can accommodate change, further bottom-up phenomena and thus be flexible. On one hand Allen (1997) highlights that the field is about forces and not material, but on the other hand he presents the field strategies; different compositions, or shapes, in the urban context, belonging to the field. Allen (1997) calls them organisational principles, and he sees them as new definitions of the traditional parts in conventional architecture. Allen highlights the importance of the relationships between these newly defined parts or compositions which acquires *a rethinking of some of the most familiar elements of architectural composition* (Allen, 1997 p.27). He means that these field strategies are *working concepts* derived from experimentation on site (Allen, 1997 p.27). According to Allen, the field conditions intentionally mix high theory with low practices. He makes the assumption that architectural theory doesn't arise in a vacuum, but in a complex dialogue with practical work (Gray 2006). This confirms Allen's idea of the bottom- up phenomena, where practice, use and effects are highlighted as opposed to the exclusivity of the designer. I will try to discuss these highly abstract models and applications, starting with the most understandable, the grid.

The agricultural grid and the urban grid.

The grid: Allen (1997) concludes that the grid is one of architecture's oldest compositions and organising devices. He considers it: *projected unconditionally over the open territories of the Western United States it is at once a symbol of democratic equality an expedient means to manage vast quantities of territory: an attempt to impose measure on the immeasurable* (Allen, 1997, p.27).
Further Allen (1997) sees the town grid as an amplification of the grid-like order of the farmland surrounding the city. Hence, the outline of the grid is derived from the operational interpretation of the landscape surface and its organisation. Allen (1997) means that the grid is able to act as a starting point for urban forces. The grid doesn't frame these forces as an overarching geometrical ideal. Instead variations within the grid will accumulate and challenge the geometry of the grid over time. This scenario is a prototypical field condition where variations in topography and history are accommodated within the grids loosely defined and porous borders. This enables for future change. Variation and repetition, both individual and collective, are therefore held in delicate balance according to Allen (1997).

Mats: In relation to the sprawl-like expansion of contemporary cities in both Europe and America, Allen (2003) sees the concept of mat-building as a strategy that should be recognized. The mat typology was first introduced by Alison and Peter Smithson in the 1960s as a reaction of modernism incapability to view the city holistically and as a process occurring over time (Muir, 2010). Allen (2003) describes how the mat is constituted by parts that fit together, between these parts there are voids. The relations and voids between the elements of the mat are porous. These intermediary spaces are just as important as the elements that they are connecting. The external shape of the mat has a loose character that is



A+J Philippou/ Cultivating Urbanism: Episodic Fields/Europan 8 competition proposal/2005.

dependant by the interrelations of the elements of the mat, as with the Cordoba Mosque. Allen (2003) describes how the form of the mat *is governed more by the internal connection of part to part than by an overall geometric figure* (Allen, 2003 p.421).

Allen (2003) proposes that the boundary of the mat is porous and extends beyond the mat. The mat constitutes a framework through the organisation of its parts. Allen (2003) means that the concept of mat-building can work as a model for urbanism in today's contemporary cities where forces and processes are operating beyond the control of the architect or planner. The mat allows some sort of order, a framework, but it still enables processes and urban forces to interrelate. The mats *give space to the active infolding of urban life without abrogating the architect's responsibility to provide some sort of order (...) mat building instead proposes a loose scaffolding based on the systematic organization of the parts. The architect can design the system, but cannot expect to control all of the individual parts* (Allen, 2003 p.421).

Allen (2003) concludes that using the mat as a model proves an understanding of architects' limited amount of control of the city and its processes of urbanisation. It further recognizes that the city is a product of many hands operating over time. Allen (2003, p. 421) means that mat-building is *anti-figural, anti-representational and anti-monumental.* He suggests that these characteristics demonstrate how mat-building doesn't intend to specify functions, but rather to create an open field enabling possibilities for future events.

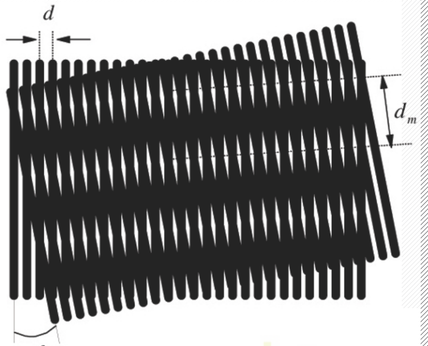
Thus, the framework of mat-building is an overall large scale model for urbanism. The promise of it is its capacity of activating voids, outside the control of the architect. These active voids, the places in-between, allow for the unexpected. Hence, the interrelations between the elements of the mat, in practice between the elements of the city, are not just links between the elements. The elements and the transitions between them together form a constant fabric, the mat (Allen, 2003). This demonstrates Allen's ideas from object to field. The city should be approached holistically rather than as seen as a collection of separate objects. The interpretation of landscape as surface acts as a defining idea for this view.

Muir (2010) assumes that the formal appearance of the mat is of a low-rise, high density and homogenous character. It has a systematic repetition in building elements, enabling a framework for varying content. The mat building aims to integrate the building to the landscape, through the connectivity between the built structure and its surrounding as well as within the mat, allowing for the structure to absorb change over time. Further, the model shows how urbanism is dependent on its citizens rather than architects, in order to develop over time. The spatial qualities of the city are shaped by functions and events, rather than the architectural framework. The method also supports a period of evolution and a time dimension in opposition to conventional models for urbanism (Muir, 2010). This supports Allen's (1997) ideas of flexibility, bottom up phenomena and the idea of the dynamic city that cannot be controlled by a stylistic geometrical model. However, it can also degrade the role of the architect or planner, and might be interpreted as a proposition for a non-hierarchical sprawling city as an ideal.

Moiré: Allen (1997) proposes that figure in the concept of figure/ground doesn't necessarily have to mean a distinguished object, but could mean an effect emerging from the field, establishing a relation between the effect and the field. Allen (1997) doesn't provide any examples of effects but rather persists on the importance of local change within a system, while approaching the overall form with indifference, as with the concept of the mat-building or the Cordoba Mosque. Allen means that this model of organisation, unlike the Modernist large-scale models, promotes *authentic and productive social differences* (Allen, 1997 p.28). To illustrate these relations, Allen is supplementing the model of mat-building by speaking of graphic moiré patterns as an abstract model.

A moiré is a pattern created when two grids are overlaid at an angle, or when they have slightly different mesh sizes. Allen means that the moiré illustrates how new unexpected effects can be the outcome of the layering of different fields (Allen, 1997). Again, the Parc de la Villette entry of OMA illustrates this effect. At Parc de la Villette, the organisation of the park was organised in layers. As these layers are superimposed, which generates a potential for new effects to emerge. This creates a synthetic effect, as with the concept of the moiré.

Digital fields: Allen's ideal model for urbanism is relatively indifferent to the overall form while emphasising the inter-relationships of the elements of the model. To illustrate the relation between the local and the regional scale, Allen talks of the shift from the analogue to the digital image. The analogue picture is static *its iconic form is maintained throughout and internal hierarchies are preserved* (Allen, 1997 p.28). Shifting from analogue to digital, the image is transferred into discrete pixels and bits of information, each bit being separate but also as a part of a system. According to Allen (1997), this means that value is evened out, since each pixel is needed to produce the overall image. Allen calls this a *field-to-field relation* (Allen, 1997). Here, Allen suggests a system that is able to shift scale, a system that is democratic and characterized by bottom-up phenomena in its flat organisation.



Moiré and blow-up of a digital field.

Flocks and crowds: Another organisational principle or field phenomenon of Allen (1997) is the flock. He draws inspiration from chaos theory and the way flocks of birds behave to explain this principle. A simulating model of a bird flock made in the late 1980s showed that even though the birds weren't programmed to form a flock (only to keep a minimal distance to its neighbour, to match velocities with other birds and to move toward the perceived centre of mass of birds), flocks were formed. Allen interprets this as a bottom-up phenomenon, since the rules were local, referring only to what a singular bird could do and see. Being a bottom-up phenomenon without hierarchical geometrical overall order, Allen labels the flock as a field phenomenon, *defined by precise and simple local conditions, and relatively indifferent to overall form and extent. Because rules are defined locally, obstructions are not catastrophic to the whole* (Allen, 1997 p.29).

Further, Allen (1997) introduces the idea that flocking behaviour could be adapted to shifting scales, since a flock functions as a collective result of the individual behaviour of the birds no matter the size of the flock. The crowd behaves in a more complex behaviour than the flocks as they are interacting in unpredictable patterns and densities. Allen (1997) suggests that crowds have four main features: it wants to grow, within a crowd there is equality, the crowd loves density and the crowd needs a direction. The crowd is less predictable than the flock, and it can be *liberating as well as confining, angry and destructive as well as joyous* (Allen, 1997 p.29). As with digital fields this suggests a strategy able to address shifting scales.

Practical application of Allen's field strategies: In practice, Allen (1997) suggests that the strategies of mats, digital fields, flocks and crowds offer a suggestive formal approach. But mainly they illustrate that: *architecture could profitably shift its attention from its traditional top-down forms of control and begin to investigate the possibilities of a more fluid, bottom-up approach. Field conditions offer a tentative opening in architure to address the dynamics of use, behaviour of crowds and the complex geometries of masses in motion* (Allen, 1997 p.30).

In practice, this means that architecture and planning, marked by their legacy of rationality and control, could be released from the dichotomy of either planning or uncontrolled growth. The opposition of control and uncontrolled growth is useless according to Allen (1997), since the uncontrollable, the modern city, cannot be controlled; we thrive in the cities because they are places of the unexpected. This dynamic situation should be encouraged. Allen (1997) puts forward that architects need to realize their own limitations and be inspired by the complex self-regulating orders present in the cities. This is possible by paying attention to existing conditions, defining rules for interrelations at the local scale, and by being relatively indifferent toward the overall configuration, as described with the example of the Cordoba Mosque. Allen (1997) calls this logistics of context: *logistics of context is a loosely defined working framework* (Allen, 1997 p.30). This framework means a network of relations that can accommodate indifference, but robust enough to incorporate change without destroying the individual parts. This is manageable by permeable boundaries, flexible interrelationships and flexible hierarchies according to Allen (1997). He reckons that architecture needs to learn to manage the complexity of the city by giving up some measure of control. The logistics of context proposes an experimental attitude to this challenge (Allen, 1997).

Allen (1997) puts forward that the field conditions intentionally mix high theory with low practices. But the practice is quite distant from Allen's discussion on flocks and crowds for example. He doesn't explicitly describe how the field strategies, grid, mats, moiré, digital field, flocks and crowds can be applied in the practical work and what the consequences are. Neither does he present how the logistics of context, the framework, can be composed. Leaving such information out might be coherent with Allen's ideas of the architect to give up a certain amount of control.

I suggest that the different strategies suggest an ideal of how a framework should function. This framework can combine the diverse elements of the field while respecting the identity of each. This holds a potential for flexibility and the accommodation of future change. Hence, the strategies rather present visions and attitudes than compositions or manual

The interpretation of landscape/
landscape as surface and field

for use. I propose that this is characteristic for landscape urbanism. The transfer from theory to form somehow stops at a conceptual level. Allen makes the transfer from theory to form by presenting the palette of organisational principles of swarms, mats etc, but it is still at an abstract level. Though some diagrammatic illustrations are very graphic and quite near the *systematic theory of architectural form and composition* he rejects (Allen, 1997, p. 24). Further, Allen (2000) does not make a complete transfer from theory to practice as he resembles the framework with the working methods of the post minimalist artists. They set up a framework by choosing a certain kind of material. For example, a thick paint will behave differently than a more fluid one. But the artist cannot fully control how the paint act when it's poured on the floor as in the case of Linda Benglis. However, comparisons like these can further an understanding of how the interpretation of landscape is derived from the field, and how this means an emphasis on flexibility and interrelations rather than form in order to address the contemporary city.

Alex Wall: programming of the urban surface

Alex Wall developed the strategies of Allen as he focused on the landscape as a surface and how the surface could be activated by programming in order to reach certain effects rather than focusing on shape and form. The emphasis on effects is similar to the idea of Corners (1999) landschaft as it emphasises the operative rather than the formal composition. Wall claims that landscape as an urban surface means more than the place between buildings, like parking lots, planted areas and residual spaces or green, natural or recreational spaces. Wall's definition of landscape is *the extensive and inclusive ground-plane of the city, the 'field' that accommodates buildings, roads, utilities, open spaces, neighbourhoods, and natural habitats* (Wall, 1999, p.233). Wall (1999) argues that the landscape is the ground structure that organizes the city and its processes. He interprets the urban surface as a dynamic agricultural field with different functions, geometries, arrangements and altering appearances as the demands change. The urban surface should thus be designed to increase its ability to support and diversify activities in time, even activities that cannot be determined in advance. This is similar to Allen's focus on flexibility and framework as opposed to composition and form. Wall (1999) promotes that looking at cities in dynamic ways means to give up traditional urban typologies, like park, square, district and garden become less important. Infrastructures, network flows and indefinite space are all valid terms according to Wall (1999). He suggests that working with infrastructure, services, mobility and enabling flexible, multifunctional surfaces would mean a revitalized

role for the design professions. These emergent conditions challenge planners and designers to revise their approach to the contemporary city and their traditional methodologies. In this context Wall (1999) emphasises the active role of programming and mentions OMA as an inspirational practice. Working with programs not only addresses physical but also social and cultural transformations of the urban surface according to Wall (1999). He presents five different approaches for designing the urban surface. These approaches emphasises programs and their effects:

Thickening: Wall (1999) means that the urban surface shouldn't be conceived as a thin board but rather as a thickened ground. Infrastructural devices such as multilayered transport systems like aerial passageways in Atlanta and Minneapolis represent this. These devices constitute a kind of thickening of the surface as they add new physical layers to it. The multilevel framework of people, connected by elevators, escalators, ramps etc. constitutes the thickened surface *continuous, multiple and dynamic. The urban surface is more than what we see from the aerial view; it's a thick layer of multiple technical, organisational and aesthetic uses* (Wall, 1999, p.245). He mentions Schouwburgplein by West 8 as an example of a thickened surface. The layering of technical and esthetical components provided a dramatic effect on the square and which multiplied the range of uses (Wall, 1999).

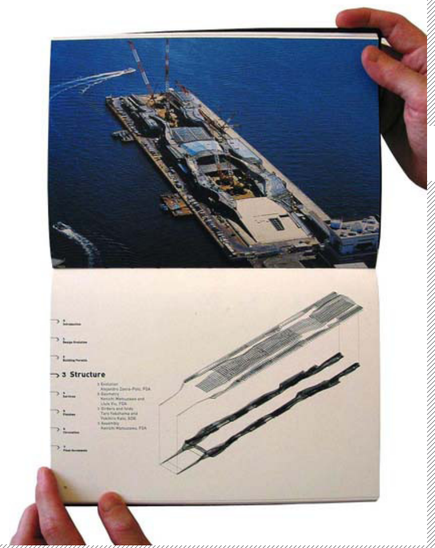
Walls idea of thickening raises the question of how a thick surface can accommodate change and thus be flexible? I argue that thickening rather describes an ideal image of how landscape could be interpreted as a thick surface, rather than providing a strategy. Thickening is a way to immerse in the discussion of urbanism as something more complex than what we see in the form of a thin board. Viewing the landscape surface as a thick board of processes is something landscape architects are familiar with. What is below the surface is highly decisive on how the surface can be programmed.

Folding: By regarding the urban ground as a surface that can be cut, warped and folded like a paper, a new kind of smooth geology that connects interior and exterior space into a continuous space can be created. This enables new combinations of program and transport, like the new port in Yokohama by Foreign Office Architects. Here, each floor rolls into the other. The flows of people and goods combine in new visible ways which challenges the traditional zonal separations. Rather they these binaries become interactive (Wall, 1999). I recognize this as a playful approach to the urban surface. It is almost an overly defined interpretation of how building and landscape can be intertwined. It not only demonstrates how the dichotomies of nature and culture can be dissolved.

It also illustrates the idea of landschaft as an active operative force. Folding exemplifies a Machinic interpretation of landscape were landscape is included as a part of a formal configuration. Thus, the question of flexibility and process is some-how ignored.

New Materials: Wall (1999) is enthusiastic about the development of new and synthetic materials to promote diversity in the pedestrian-scale. New material can trigger new activities and expressions such as skateboarding, which acknowledges the revaluation of the traditional programs associated with parks (Wall, 1999). Here, Wall defines material as a potential for generating effects. However, material might be dependent on form. This is an aspect that is often rejected within the landscape urbanism discourse.

Non- programmed use: Service and furnishings that can be controlled and modified by the users of the site enables flexibility and generate a surplus value. Instead of setting up elements with one function, a design that can be adopted and rearticulated by the users of a place is both economical and enriching as social space, according to Wall (1999). He mentions Adriaan Geuze as a designer that is specially engaged in designing objects and places that are indeterminate in their



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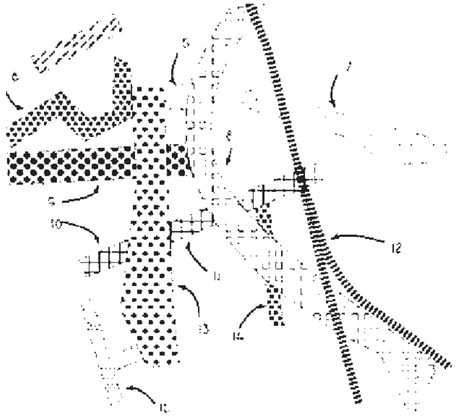
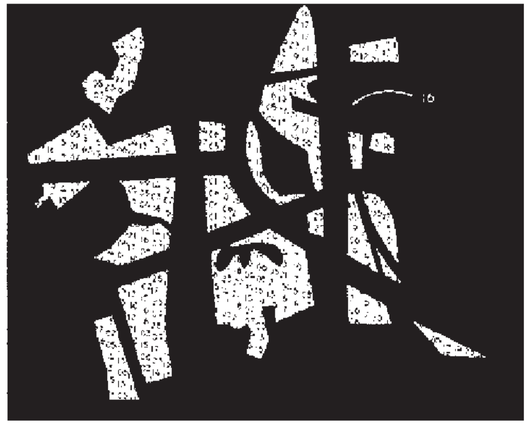




Melun Senárt, landscape in black.

functions; thereby the users can invent and claim space for themselves. Wall (1999) concludes that the non-programmed use ensures a long and affectionate occupation of public space. Again, Wall focuses on effects. This strategy has a potential to be flexible as it involves the users and lets them to for example move a chair and decide where to sit. This flexibility has a potential to generate the affectionate occupation Wall (1999) is discussing.

Impermanence: Wall (1999) means that program and function are the most changeable aspects of any city. These changes can come quickly, and city administrators must be able to respond quickly to these changes without having to tear down infrastructure to accommodate new desires and demands. It is thus necessary to design for the dynamic, temporal and indeterminate. Wall (1999) mentions the OMA projects;la Villette (1982) and Melun-Senárt (1987), as examples where these aspects of temporality and dynamics were incorporated.

At Melun-Senárt, instead of deploying plans of buildings, the office sketched out several programmed voids, between the buildings. The location and design of these voids was derived from a careful analysis of site characteristics, habitat, history, existing infrastructure corridors, and new programs (Wall 1999). The voids form a provincial structure in which islands of future settlements were isolated, resilient to the unstable political, economic and cultural forces that govern the built environment (Shannon, 2006). Koolhas believe that *Melun-Senárt will be less form, defined by this system of emptiness that guarantees beauty, serenity, accessibility, identity regardless-or even in spite of-its future architecture* (Rem Koolhaas, 1995 p. 981). Wall (1999) states that la Villette and Melun-Senárt *not only designed a landscape but also a framework capable of absorbing future demands without diminishing the integrity of the project* (Wall, 1999, p.246). The organisation of la Villette and Melun-Senárt were laid out as a combination of programs, subject to changing demands, as *a montage of effects* (Wall, 1999 p.246). The ideas of impermanence are similar to Allen's ideas of the framework that can combine diverse elements of a field while respecting the identity of each. Wall combines programs and effects rather than composing objects.

Movement: Wall (1999) suggests that the traditional sites for collective life in the cities, such as the square or the park, have been replaced by spaces of mobility, like the freeway. New infrastructural projects, such as the Ronda de Dalt in Barcelona, show how infrastructural corridors become significance as ecological and social corridors, collecting, distributing and connecting users and functions (Wall,

Dlandstudio's design for an ecoduct to cover an expressway, Brooklyn NY.

1999). These infrastructural projects combine transport with green areas, thus hybridising natural and cultural elements. As with folding, this could be seen as an interpretation of landscapes ability to synthesise natural and cultural forces and to transfer these abilities to form. However, one might question the recreational qualities of these spaces.

Compared to Allen, Wall expresses a focus on the programs of the urban surface and the effects of the programs. He doesn't reflect upon the desired character of these effects. What will the effects lead to and how will the consequences be taken care of or implemented? This might be analogous to Allen's idea of bottom- up phenomena and the articulation on the giving up of control, the designer cannot control the effects. The strategies of Wall cover both metaphorical and operational interpretations of landscape, but are generally more defined than Allen's abstract field strategies. Wall is quite operational in his approach, as he discusses unprogrammed use, movement and folding. In other strategies, such as thickening, he rather interprets landscape metaphorically and conceives a mental and abstract model rather than practical strategies. Overall, Wall and Allen both emphasis flexibility, the ability to absorb change and a certain amount of giving up control and authority of the designer.

Corner's surface strategies: aiming at flexibility

In 2003 Corner described five aspects to illustrate the relation and transfer between theory and practice within landscape urbanism: Horizontality, infrastructures, forms of process, techniques and ecology (Bach, 2008). Horizontality is described in this section of the paper. In the context of urban development, Corner's idea of horizontality presents potential strategies for landscape urbanism-projects. The interpretation of landscape as surface and thus the articulation of for example flexibility, effects and framework, are recognizable from Allen (1997) and Wall (1999). Where Allen talks about strategies like mats, flocks and crowds, Corner suggests surface strategies. Bach (2008) means that the element of horizontality includes three surface strategies aiming at open-ended flexible planning to address the dynamic city. Corner's three surface strategies illustrate his idea of the contemporary city as a horizontal thick surface of three layers as defined by Bach (2008): demarcation, infrastructure and adaptation. These layers are described by Corner: *Land division, allocation, demarcation and the construction of surfaces constitute the first act in staking out ground; the second is to establish services and pathways across the surface to support future programs; and the third is ensuring sufficient permeability to allow for future permutation, affiliation, and adaptation* (Corner cited by Bach 2008 p.53). These surface strategies have a metaphorical and operational interpretation of landscape. First they act as layers; demarcation, infrastructure and adaptation, that together constitute the thick surface of the landscape. Secondly, they are working with the preparation of a given site and the adaptation of the future demands simultaneously. This has an operational dimension.

Adaptation as a strategy for flexibility: The first two layers, demarcation and infrastructure are the equivalent of traditional planning strategies, such as the creation of building plots and the establishment of infrastructure to support an area, according to Bach (2008). The third layer, adaptation, has an unconventional approach. Adaptation includes a process-oriented dimension. This layer has to be corresponded by a more dynamic and flexible planning model (Bach, 2008). Adaptation means to be able to correspond to change and to accommodate it. The layered model implies that interrelation between the layers is possible, the individual layers have a potential to influence each other. This means that the third layer of adaptation introduces the concept of process and dynamics in the rest of the layers, since adaptation, the third process-based layer, influences and decomposes the other layers, demarcation and infrastructure, over time. Hence, demarcation and infrastructure are inserted with the possibility of adaptation (Choong Knudsen, Bjerg and Riskjær Hansen, 2008).

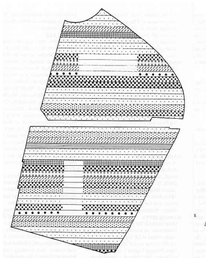
In practice, this means that the layers of demarcation and infrastructure have to be capable of including new programmes over time, acting as a surface that can adapt to different uses without neglecting the overall structure of the surface (Choong Knudsen et. al, 2008). This is analogous to Allen's idea of a framework that can accommodate change without loosing its identity, like the Cordoba Mosque. Wall mentioned the OMA entry for the Parc de la Villette competition in this context. Choong Knudsen et. al (2008) discusses that this means a shift from static masterplans towards more fluid plans acknowledging the stages of the site, from existing conditions, to construction, erasure and revitalisation. This new kind of plan will simultaneously activate the site by at each stage of the plan showing stimulating actions and potentials creating certain effects on the site (Choong Knudsen et. al, 2008).

I mean that this view is interesting and probably more appropriate than conventional plans to address and enhance dynamics and process in the city. However, the implementation might be counteracted by the public sector and its vast apparatus of decision making. The next section describes how adaptation can be achieved in practice. Bach (2008) defines three different ways of working with boundaries in order to reach flexibility and adaptation.

Three methods to reach adaptation and flexibility: To illustrate the third strategy, adaptation, Bach (2008) exemplifies it in three methods that are all illustrating how flexibility can be achieved. These methods are primarily based on working with a framework, as advocated by Allen (1997) and Wall (1999). The methods that further adaptation means to work with three different kinds of boundaries:
porous boundary- flexible borders.
superimposed boundary- superimposed fields of different functions.
conceptual boundary- borders related to the overall architectural concept.

Porous boundary: The first method that illustrates how adaptation can be achieved is porous boundaries. It means a model where the borders of or within a project aren't distinctly drawn, which enables flexibility and allows function to change over time. Bach (2008) is referring to boundaries that can be moved, permeated and dissolved. Allen (1997) also talks about porous boundaries when he is describing the mat. Bach (2008) mentions Parc de la Villette as an example where the idea of porous boundaries has been implemented. The structuring layer of the strips have porous boundaries since strips can be added, taken away or merged depending on changing demands over time. The boundaries of the strips are thus temporary, and reflect the context of the site and the need of its users. The other layers of infrastructure and buildings are not heavily programmed which supports the idea of flexibility. Bach (2008) concludes that the surface strategies are exemplified by the strips (demarcation) and the infrastructure layer (infrastructure). The third layer (adaptation) is exemplified by the adaptability and the porous demarcation of the strips.

Superimposed boundaries: The second method that illustrates how adaptation can be achieved is superimposed boundaries. The superimposed boundaries mean a model of layers with defined fields that can be superimposed to enable future change. The organisation of the site is structured in several layers. These layers work together as a whole since the individual geometry of each layer is adapted to the geometry of the other layers (Bach, 2008). Thus, a flexible organisational layout is arranged that can work in a larger context. As an example of the superimposed boundary, Bach (2008) mentions Beigel and Christou's project Brikettfabrik Witznitz from 1995. A part of the project site was laid out as allotment gardens; the layout pattern was designed to enable future development of cabins on the plots. If there would be a need for larger housing complexes, several allotments could be combined into one. This exemplifies superimposed



Porous boundaries: OMAs competition entry for Parc de la Villette
Superimposed boundaries: Brikettfabrik Witznitz

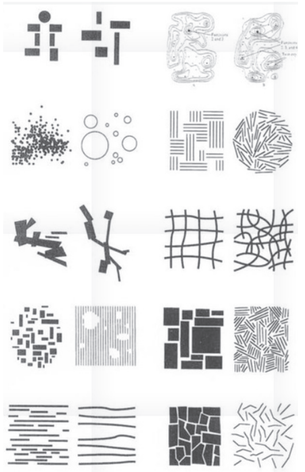


Diagram by Stan Allen (1997) corresponding to the idea of conceptual boundaries.

boundaries and flexibility since the layout pattern was able to respond to possible future demands (Bach, 2008). The interpretation of landscape as a surface and the organisation of the field in a grid-like structure are clear. The field thus becomes a three-dimensional character as the layers are superimposed.

Conceptual boundaries: The third method that illustrates how adaptation can be achieved is conceptual boundaries. Conceptual boundaries illustrate the aspect of a conceptual architectural model, like the patch- or the grid structure. These concepts, the patch and the grid, have a strong formal concept but are flexible within this concept. The fields of the patches or within the grid are independent, but collectively constitute the overall identity of the site. The fields of the grid could change their programs, but the overall concept would still be the grid, though some fields are combined or extruded. A field of patches could still be called a field of patches regardless of the attributes of the patches (Bach, 2008). Conceptual boundaries thus allow for the shifting of scales since the fields and patches can be of various sizes within the overall architectural idea. This has a potential to further flexibility.

Is flexibility a realistic ideal? Bach (2008) acknowledges that it isn't easy to adopt the surface strategy of adaptation in practice. The idea of dynamic process implies that the layout of a site plan may change over time and that these changes should be considered and presented in the first plan. Consequently, this demands a lot of flexibility from the first two surface strategies, demarcation and infrastructure. To enable the third strategy, adaptation, it is important that the first two strategies are not treated as in traditional planning practice with a focus on objects. But, as Bach (2008) concludes, there is a contradiction in this reasoning. On the one hand, one shall work with infrastructure and demarcation. On the other hand, the possible dissolving of the same (infrastructure and demarcation) should be addressed and incorporated in the project. But infrastructure needs to be materialized; it has a well defined function and is not transitory. A gravel path can be moved easily, but a freeway or a cloak system is expensive and complicated to relocate or modify. The larger the project, the higher grade of consolidation and the more the adaptability decreases (Bach, 2008). Hence, Bach (2008) supposes that Corners surface strategies are best used on large scale projects operating over a long time span, or in small scale projects (like a park or residential area) that are less consolidated and therefore more receptive to change. On the large scale, the strategies can work as an abstract overall concept model where programs and infrastructures aren't set. But, as soon as buildings and infrastructures come in place, the possibility for flexibility and adaptation decreases, according to Bach (2008). The striving for flexibility and adaptation could be a risk in the planning practice if the framework is too loose and undefined. When building structures and programmatic intentions aren't identified in order to keep an open attitude to upcoming ideas and future demands, design and decision-making is avoided. This means a risk (Bach, 2008). This is also discussed in the section addressing the Downsview Park competition on page 49.

Bach (2008) labels projects like Parc de la Villette and Brikettfabrik Witznitz as successful projects where the structures of the projects were inspired by the organisation of the landscape. I argue that these structures were both derived from the organisation of the surface of the agricultural landscape in the form of agricultural strips and fields. Bach (2008) means that this structure enables flexibility as the structures can absorb different programs depending on the demand of the users. As the programs and activities change, the overall structure remains, since their design isn't depending on the programs, their realization or character. This is analogous to Allen's discussion on the Cordoba Mosque.

Flexibility is an attractive ideal within the landscape urbanism discourse. The idea of a city that can absorb change and nurture from this change rather than being destructed by it is an appealing idea. This would also have an economical gain if sites would be able to work and function over time without losing their function and identity. But as Bach (2008) discusses, the range of projects than can be subject to a flexible planning is limited. The boundary strategies need to be studied in practice; How can a a boundary be porous? What does the boundaries of the strips in the la Vilette entry of OMA look like in practice? How can these boundaries be made flexible in practice when it comes to material?

The interpretation of landscape/
landscape as surface and field

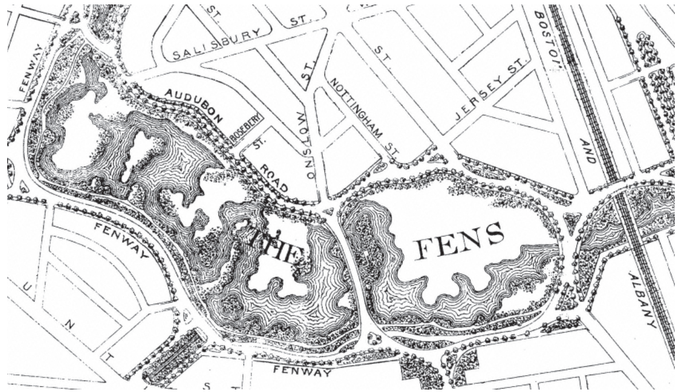
The staging of surfaces according to Corner

The surface strategies discuss how flexibility in planning can be reached over time by introducing a third layer to planning, adaptation. Adaptation can according to Bach (2008) be transferred to practice by the use of three methods, porous, superimposed and conceptual boundaries. Three years after surface strategies, Corner defined four themes to organise landscape urbanism in the paper Terra Fluxus (2006): Process Over Time, The Staging of Surfaces, the Operational or Working method, and the Imaginary (Gray, 2006). The staging of surfaces will be described in this section of the paper. The operational or working method will be described in chapter four on page 115. Process over time is addressed in the subchapter Landscape as Ecosystem on page 96. Compared to the surface strategies, the staging of surfaces articulates the structuring potential of landscape whereas the surface strategies focus on flexibility. They both take landscape as surface as a point of departure when elaborating on different strategies to approach the dynamic city.

As we have seen so far, surface means more than a flat board in the context of landscape urbanism. The second theme in Corner's classification of landscape urbanism deals with the horizontal surface, or field, *the field of action* (Corner, 2006 p.30). This surface includes the entire range of scales in the urban field, from sidewalk to street, to its overall infrastructure. Corner (2006) declares that there are two meanings to the theme staging of surfaces. The first meaning focuses on continuous horizontal surfaces, where buildings and landscape become one, as describes by Wall's (1999) idea of folding. The second meaning focuses on landscape as infrastructure and its ability to act as both catalyst and as a structure for future development. Landscape as infrastructure is elaborated on below.

Landscape as infrastructure and structural element: According to Corner (2006), landscape has a *capacity to theorize sites, territories, ecosystems, networks, and infrastructures and to organize large urban fields* (Corner, 2006 p. 23). This illustrates Corner's (1999) idea of landschaft, the landscape as an active force that is able to include and structure different processes. He demonstrates the capacity of the surface of landscape to act as organizing infrastructure by mentioning projects where urban landscapes have functioned like ecological transportation channels. One example is the hydrological stormwater-system which motivated the necklace-like design of the green structure of Boston's Back Bay Fens. Another example is the greenbelts that pierce the city core of Stuttgart, bringing fresh

mountain air to the city. In Boston, Olmsted used the landscape and its functions, the hydrology, as an organising structure forming *a landscape system designed to accommodate the framework of people, the flow of water, and the removal of wastes* (McHarg is cited in Muir, 2010 p.32). This structure, defined by infrastructure; roads, park, sewer system and transport facilities constitute a structure for future growth of the city (Muir, 2010). Corner (2006) means that Boston's Emerald Necklace and the greenbelts of Stuttgart demonstrate the importance of these systems for the well-being for the urban population. But mainly they illustrate how the processes of landscape can structure the city. They also show potentials of landscape urbanism and its ability to shift scales *to locate urban fabrics in their regional and biotic contexts, and to design relationships between dynamic environmental processes and urban form* (Corner, 2006, p.24). This illustrates an ambition to analyse the context and the conditions of a site through a regional lens with an ecological agenda. Subsequently, the *dynamic environmental processes* found in the analysis, such as the hydrological system of a site, are used to generate urban form (Corner, 2006, p.24). This illustrates how landscape can be included as a structural element.



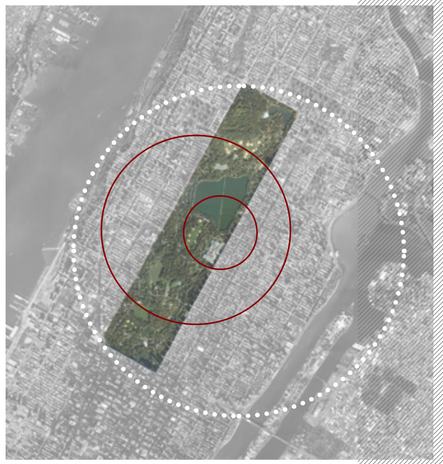
Landscape as the synthesis of natural and cultural systems:
Elizabeth K. Meyer describes Boston's Emerald Necklace Park system as: *a hybrid of machine and organism, a nineteenth-century landscape cyborg… Partly a found stream, partly a constructed riverway, partly a storm sewer, partly a constructed wetland, and partly an urban circulation system* (Meyer cited in Muir 2010, p.32). Corner (2006) doesn't agree with Meyer's definition of Boston's Emerald Necklace Park system as a hybrid that is able to incorporate natural and cultural processes. He declares that in projects like Boston's Emerald Necklace Park system, a cultural image of nature, *an image to which landscape is firmly attached* is applied (Corner, 2006, p.25). For example, Olmsted hid the artificial elements of his work, making the dynamic processes concealed and thus preserving the image of untouched nature. Nature was represented by the pastoral scenes of landscape painting, and was regarded as comforting, in opposition the morally degenerated city (Corner, 2006). This is in opposition to Corner's idea of landschaft. Thus, Corner seems to mean that Boston's Emerald Necklace Park system doesn't represent the idea of a hybrid system.

Boston's Back Bay Fens and the grid.

Corner suggests the creating of an ordered landscape structure which organizes future development like buildings and roads. The aim is to construct a green structuring fabric that is flexible enough to allow for future use and change, as described by Wall (1999). Not only will the landscape act as a structuring element in the cities today, but also for possible future uncertain scenarios of the city (Corner, 2006). This means to foresee different kinds of processes like social, cultural and economical. A common practical example of a structuring element within the landscape urbanism discourse is the grid structure, also defined by Allen (1997). As Allen, Corner (2006) sees it as a framework that is able to correspond to change over time. The organization gives order to the surface and allows for individuality in each fieldsection, while remaining open for mutations over time. This kind of structure allows for shifting populations with different interests and programmes over time according to Corner: *It includes social, cultural and economical values. This attempts to create an environment that is not so much an object has been 'designed' as it is an ecology of various systems and elements that set in motion a diverse network of interaction. (...) This approach, at once simple and conventional, affords residents a range of programmatic configurations as seasons, needs and desires change* (Corner, 2006, p.31).

Thus, landscape as a structuring element also incorporates and synthesises the social and cultural factors as the city becomes a *working-surface over time* (Corner, 2006, p.31). Corner also mentions the OMA- project for a new town in Melun-Senárt, France to illustrate how the landscape acts as a structural element (Corner, 2006). With landscape as structural element, Corner doesn't mainly address flexibility as with the surface strategies. Landscape as a structural element rather emphasises the synthesis and hybridization of nature and culture. Allen (1997) addresses the idea of hybridization with the moiré and Wall (1999) with the idea of folding and infrastructure.

Landscape as catalyst: According to Corner, landscape and its infrastructures have the ability to act as a catalyst for different effects or processes in the city. In this sense, the Central Park can be included as an example acting as a catalyst for exploitation in the surrounding areas (Corner, 2006). Another example is the High Line project in New York where landscape interventions can attract urban development (Kvisthöj, 2008). Corner reasons that the kind of flexible open spaces like Central Park, the British commons or the Indian maidan are prepared grounds that have the ability to generate *performative social patterns and group alliances that eventually colonize these surfaces in provisional yet deeply significant ways* (Corner cited in Shane, 2003 p.3). The kind of social patterns Corner is referring to would evolve in an ad hoc way through different activities, generating different effects. He mentions the historic commons at Hampstead Heath in London where *seasonal carnivals, sporting events, clubs, disorganized fireworks, organized walks, races, nude sunbathing, swimming but also obscure activities like gang fighting and gay activities, all operates on a site located within the urban fabric* (Corner cited in Shane, 2003 p.3). This is similar to Allen's idea of bottom-up phenomena. Flexible space means the possibility for events and effects to take place outside the control of the designer.



Central Park as catalyst.

Discussion: Landscape as surface and field

Landscape as surface and field is proposed to be one defining idea of landscape urbanism in this paper. This idea means to see the surface and field of landscape as a thick board that can incorporate and hybridize different processes over time. This is how the city functions and how it needs to be addressed. In order to do this, flexibility is articulated. To tackle the dynamic of the field and to control its limits, Allen (1997) proposes the flexible framework. This means to give up the design of singular objects but rather to articulate interrelations and effects. Wall (1999) engages primarily in these effects by suggesting the design of programs rather than form in order to reach flexibility. Bach (2008) recognizes Corners surface strategies and the layer of adaptation to address process and dynamic conditions. These strategies all emphasises a non-authoritarian role of the designer. The surface and the horizontality of the landscape indicate a belief in a horizontal flat organisation where each component matter. This is illustrated by Allen with for example the digital field. Prominski (2005) means that this non-authoritarian role of the designer challenges the traditional role of the designer, since the proposed system and strategies leaves a lot of the future development to forces beyond the control of the designer, *it calls for a humility many designers are not used to* (Prominski 2004 p.33). Developing these kinds of systems also demands abstract thinking in a way that the common task of designing objects with a specific form doesn't (Prominski, 2004).

Reviewing the ideas of Allen (1997), Wall (1999) and Corner (2006), I regard Corner to be most oriented towards landscape architecture. Corner includes landscape in the design and acknowledges green values. Allen and Wall are more oriented towards urbanism and hard values. They interpret landscape as surface in a metaphorical sense to produce abstract models. But the operational interpretation in the form of Allen's surface strategies and Wall's methods like thickening and folding, are not really taking their departure in the landscape. The metaphorical interpretations primarily lie in the surface as being dynamic and able to incorporate change. Consequently, the abstract strategies of Allen and Wall aim at corresponding to this by furthering flexibility. However, the strategies are not grounded in the landscape or derived from it. Corner on the other hand gives a defined idea of how landscape can structure the city, as the idea of landschaft implies. The strategies and methods of Allen and Wall have a varied degree of abstraction whereas Corner engages more in the functions of the landscape and its processes and include them in the design. I suggest that this makes the methods less ambiguous.

Landscape as ecosystem

Revaluating landscape as landschaft means to regard the landscape as active and performative. As described above, the surface of landscape is not to be seen as a flat board without activities within the landscape urbanism discourse. Choong Knutsen et. al (2008) reflect on how a section of the surface presents an abundance of dynamics and processes within landscape urbanism. This includes plant life, changing soil conditions over time etc; all making the surface a vessel of dynamic conditions (Choong Knutsen et. al 2008). This metaphorical interpretation of landscape gives rise to operational strategies described by Allen and Wall among others. Richard TT Forman discusses how the horizontality of landscape as surface and the dynamic ecosystems of landscape as ecosystem complement each other in composing the landscape (Doherty, 2006). I argue that this relation is valid for the relation between the defining ideas of the landscape urbanism methodology. Where the landscape as surface and field is engaging in the vastness, horizontality, and layering of the landscape, landscape as ecosystem is addressing the processes and dynamics within this surface.

In summarizing the relation between landscape and the public realm during the last century, Swaffield[3] concludes several shifts of meaning: from landscape as public philanthropy, green space for collective health and well being to landscape as popular consumption and finally to the contemporary stage, landscape as ecosystem. I suggest that the word ecosystem implies something operational. Landscape as ecosystem means to metaphorically interpret the landscape as a dynamic ecosystem, derived from the revaluation of landscape as landschaft. Landschaft and modern ecology synthesises natural and cultural processes. This means that the ecosystem is affected not only by ecological processes but also social, cultural, historical and cultural processes. The city is viewed through the lens of ecology and is thus perceived as an evolutionary system, described by Kvisthöj (2008) on page 111. Hence, the operational interpretation means to address the urban conditions with methods and strategies that can encourage and further this synthesis of different processes.

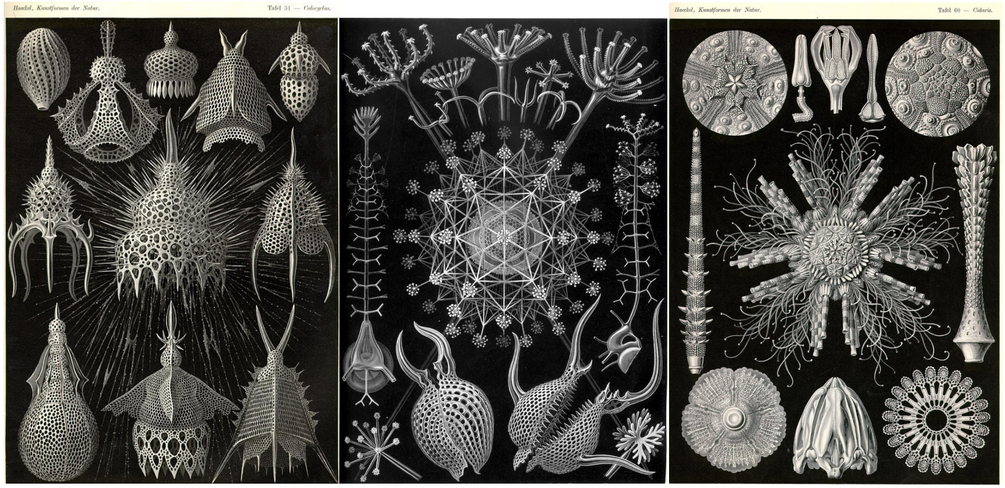
Interpreting the city as an ecosystem means an understanding of temporal concerns and dynamic systems which is a fundamental concern of landscape urbanism, according to Gray (2006). Ecology offers perspectives on complex inter-relationships. The way these interrelationships work could be used as a model when the different components of the city and their relations are being analysed. This chapter studies how the interpretation of landscape as ecosystem within landscape urbanism means a focus on the principles of dynamics, syntheses and process within landscape urbanism.

3 Simon Swaffield, lecture in Stockholm 7th October, 2010.

A modern ecology: an integration of natural and cultural systems over scale, space and time

To work with ecology in the planning context is not new. Design with Nature by landscape architect Ian McHarg was published in 1969. The ecological dimensions in the planning of the city was emphasised and a stronger link between landscape and ecology was set in his work (Muir, 2010). Corner (2006) acknowledges that regional ecological planning methods from Design with Nature lay the foundation for many of the ideas of landscape urbanism. McHarg also introduced process-oriented thinking. He focused less on visual aspects while concentrating on processes of geology, vegetation and hydrology. These features in the landscape would then determine appropriate sites for development (Corner, 2006). At the time for McHarg's Design with Nature, ecology proposed the idea that ecosystems were closed towards the impact of the outside, working towards a state of balance within the ecosystem. Human intervention was seen as a separate external force that was primarily doing harm, threatening the balance of the ecosystem (Muir, 2010). Hence, Corner (2006) means that the ecological planning of McHarg in many respects excluded the city out of the equation. Further, McHarg was criticized for discarding design and mainly addressing large scale planning, thus failing to recognize ecosystem and ecological processes within cultural systems (Muir, 2010).

Over the past twenty years the view on ecology as a scientific knowledge has developed significantly. Modern ecology acknowledges ecosystems to be dynamic, open and self-organising. At the same time they are recognized as unpredictable. They are in a constant transformation as they correspond and adapt to change on the local, regional and global scale. In the 1980s the landscape ecologist Richard T.T. Forman presented a new way of approaching landscape architecture through the lens of ecology. He suggested that landscape ecology should be seen as an interaction between spatial conditions and ecological process. Landscape ecology presented new theories, concepts and methods that manifested the importance of space as a factor in the understanding of ecosystems. The importance of spatial conditions, patterns and patches and their relation were stressed. Hence, the spatial design qualifications of the landscape architect



Nature as a curisosity, images by the German biologist Ernst Haeckel (1834-1919).
Urban nature, image from Ecological Urbanism (2010).

were combined with the scientific biological approach of the ecologist. This suggested a new model for landscape architecture: the integration of design and environmentalism while including the city and human impact in the equation. This meant a possibility to combine natural and cultural systems while addressing spatial conditions over time. This paradigm shift enabled new approaches on design-strategies. Having the ecosystem as a model allows for a design strategy that highlights complexity of both human and cultural character. Further it highlights the design of a resilient system that can accommodate change and recover from disturbance (Muir, 2010).

Modern ecology as a metaphor for describing the city holistically

Modern ecology is adopted by landscape urbanism; the city is viewed through the lens of the dynamics of modern ecology. According to Corner (2006), ecology has taught us that all life on our planet is intertwined in dynamic relationships. Therefore linear models are not suited to describe these relationships. Ecology teaches us how individual parts that act over a large system continuously create effects that are transforming an environment over time. These dynamic conditions and processes present a model in which a particular spatial form is only momentary, on the way to becoming something else. Seemingly chaotic and incoherent systems can have a structure resulting from spatial rules as in an ecosystem (Corner, 2006). Corner (2006) means that this model can be transferred to the urban realm. He claims that cities and infrastructure are just as organic as forests and rivers. He regards cities as part of interconnected dynamical systems, flows and processes, where a change at one point in the system influences the entire system, just like in an ecosystem (Corner, 2006). This interpretation of Corner highlights contingency and bottom-up phenomena. Each organism of the ecosystem affects the whole. This is similar to Allen's idea of field strategies such as the digital field.

Modern ecology intertwines different kinds of processes, both natural and cultural. Consequently, Corner (2006) states that the cultural, social, political and economical processes in a city need to be integrated and interwoven with the natural systems. He means that landscape urbanism has the aim to deal with all these forces and processes that operate over the urban area. Within landscape urbanism, this area is viewed holistically, like an ecology that is changing over time. Corner (2006) calls this condition Terra Fluxus, as opposed to Terra Firma (static, unchanging, definite). Terra Fluxus is derived from the interpretation of landscape as a dynamic ecosystem, I suggest.

What does modern ecology mean in a landscape urbanism context?

In the paper Terra Fluxus Corner (2006) discusses the contemporary city. This dynamic phenomenon needs to be addresses dynamically. Corner describes how: *A truly ecological landscape architecture might be less about the construction of finished and complete works, and more about the design of processes, strategies, agencies, and scaffoldings - catalytic frameworks that might enable a diversity of relationships to create, emerge, network, interconnect and differentiate. The aim for the design of these strategic grounds would be not to celebrate differentiation and pluralism in a representational way, but rather to construct enabling relationships between the freedoms of life (in terms of unpredictability, contingency and change) and the presence of formal coherency and structural/ material precision - a double aim* (Corner cited in Prominski 2004, p.32).

Corner articulates how viewing the city through the lens of modern ecology means a focus on the design of process and contingency. I suggest that it also means a focus on the synthesis of different systems and resilience. This requires new working methods. These aspects will all be elaborated on below; process and form, contingency and resilience, and new working methods and approaches.

Process and form: Corner (2006) means that urbanization processes like globalization, mobile capital, deregulation and environmental protection are more important for the creation of urban conditions and situations than spatial forms. He exemplifies his argument with modernism. Modernism proposed that physical forms generate new social patterns. According to Corner (2006) these kind of form-focused models like modernism and New Urbanism are bound to fail. The diversity of dynamic urban processes cannot be held in a static, spatial frame which doesn't adapt to the dynamic conditions of the city (Corner, 2006). Corner anticipates a new kind of urbanism which is: *moving from both modernist and New Urbanist models of ordering the city (both of which believe that formal models alone will remedy the problems of the city, stylistic differences not withstanding), to more open-ended, strategic models* (Corner cited in Shane, 2003 p.3)

In modernism the belief was that form would control processes, in landscape urbanism processes and form influence each other, according to Corner (2006). Landscape urbanism focuses on these processes and emphasizes them without neglecting designed physical form, according to Corner (2006). But, in opposite to modernism, the form is created and maintained by the processes that flow through it.

Competition entry by STOSS Landscape Urbanism for the Waterfront and Lower Don River area in Toronto, Canada. *The proposal begins with the river, renewing the Don, and allowing the river the space it needs to function hydrologically and ecologically. The river, in turn, shapes the metropolis , giving rise to unique, dynamic, engaging, worldclass neighboorhoods and open spaces.*
(http://www.stoss.net/lowerdon.html, accessed at 2nd March, 2011)

The interpretation of landscape/
landscape as ecosystem

This emphasis on urban processes is not meant to exclude spatial form but rather seeks to construct a dialectical understanding of how it relates to the processes that flow through, manifest, and sustain it (Corner 2006, p.28).

According to Corner, the dichotomy of process-form is not valid, since form, material, geometry, space and configuration are constructing the ecological system, its pathways and matrices. Process is nothing without matter, formal configurations allows and resists certain flows and activities in the landscape. It is important to include process and form and their interrelationship according to Corner. He means, that a more interesting landscape architecture would evolve, if the visual aspects of material, scenic composition and geometry were put in relation to process and how they could promote or resist ecological processes in order to reach certain effects. The interrelationship between the visual and process should, according to Corner, include more than biology, but also be understood in programmatic, cultural, imaginative and experiential terms (Corner, 2007, p.151).

The design of process: Corner (2006) discusses how the future of urbanism must derive from an understanding of process, *how things work in space and time* (Corner, 2006, p.29). Working with temporal and spatial interrelations is known by landscape architects who are profoundly familiar with the ever- changing working material of soil and vegetation. Landscape architects know how to value the various stages of development and not just necessarily the end result. Thus, rather the process in itself becomes the end product (Kvisthöj, 2008). Corner (2007) acknowledges that the shifting medium and ever-changing dynamics of landscape make it both rich and difficult to shape and manipulate. Hence, the focus is on the design of processes and systems rather than static form. Landscape requires a creative approach on how these systems are designed: *In this sense, landscape exceeds typical architectural concerns with formal and stylistic appearance, and demands a more focused attention to the design of method, process and configuration of emergence* (Corner, 2007, p.150).

A design of process could be to design a management strategy. Corner (2007) emphasises the meaning of management as a design factor regarding designed landscapes. Management also conducts how the landscapes function ecologically and how they develop. They could either maintain a certain state or be managed toward a more complex form. Corner means that the latter is suitable for large-scale landscape projects that take time to implement and require time for ecological conditions to be cultivated, grown and developed. *Here the design of time, unfolding and adaptive management becomes at least distinct, if not more significant*

than, the design of space, form and place (Corner, 2007, s.150). This emphasis on the design of process is recognizable from landscape as surface. The design of a framework, illustrated by Allen (1997) with the Cordoba Mosque, is analogous to Corners design of process in the form of a management strategy.

The design of process mustn't necessarily mean a design of natural process. Modern ecology intertwines natural and cultural systems, and this has influenced landscape urbanism. Hence, landscape urbanism stresses the possibility to use the systems of ecology as more than a model for biotic concerns at the site, but also to see the dynamics and processes of ecology as a model to engage social, cultural and economical systems. This promotes possibilities of new relationships between prior un- or disconnected systems and actions, which in turn produce further actions (Gray, 2006). However, social processes are abstract and immaterial, and thus difficult to condition. Choong Knudsen et. al (2008) discusses how working with programmes can activate social processes in a landscape urbanistic context. This is similar to Wall's (1999) ideas on programming the urban surface. Choong Knudsen et. al (2008) mean that if areas in the city are programmed as open space with diverse programs, there is a potential to attract different types of people to the place. This in turn enables different kinds of programs to overlap, creating new programs and new effects. I suggest that this effect could be compared to the strategy porous boundaries, discussed by Bach (2008) in the Landscape as surface chapter.

Composing with programs rather than form enables the possibility to work with effects in a temporal and spatial context. This means a design of process in a social context, I propose. Choong Knudsen et. al (2008) suggest that programs changing in space and time can create both temporal instant impressions of excitement whereas more constant programs can help create a feeling of spatial stability and continuance, a feeling of home. Graham Shane (Choong Knudsen et. al 2008) uses the term "performative cycles" to describe processes and their time-frame. He categorizes the performative cycles according to scale in short-term a long-term cycles. Small-scale cycles like a flea market or a street fair can engage people and change the attributes of a site for a short time span. Local organisations or clubs can be engaged in the design process of a site. The local aspects, their processes and potentials, can thus be included in the whole apparatus of a project process and its global and regional processes. The combination of top-down and bottom-up attitudes has a potential to combine and interrelate the performative cycles according to Shane (Choong Knutsen et al, 2008).

The High Line project in New York, designed by Field operations illustrates Shane's performative-cycles. The project proposes a number of actions over time. Certain activities such as watching the sunset, is linked to certain times on the day which gives the park a sense of diurnal rhythm. Other activities have weekly, monthly and annual basis (Kvisthöj, 2008). This kind of cyclic programming might have a potential to inject flexibility to a site as well as resilience, since the programs are diverse and multiple which attracts a wide range of visitors to the park at different times of the day, week and year. The idea of performative cycles means a holistically thinking similar to Allen's ideas of bottom-up phenomena where each part matters in both the small scale and large-scale context.

Processes as a point of departure for the design–Finding as founding: Kvisthöj (2008) means that many projects in contemporary landscape architecture are based on the natural processes operating on a site, having a dynamic and procedural approach to nature. Kvisthöj (2008) regards this as a decoding of the connections between the effects or attributes in the landscape and their cause. Through the knowledge of landscape processes and their mechanisms, interventions can be made to manipulate the landscape processes to reach a desired development. The instrumental potential of the landscape study is thus the specific knowledge about the processes in the landscape that affect the spatial and physical expression of it (Kvisthöj 2008). Corner (2006) describes this as creating relationships between natural processes and urban form where the natural processes will act as form-generators. This is represented by the Field operations mode discussed on page 62.

In the context of landscape-based, site-specific strategies such as the Field Operations mode, where on-site processes are incorporated in the design, selecting what information is considered relevant in the landscape is a central task. The chosen information will form the basis of the design proposal. Corner calls this process of selecting what information is considered relevant in the landscape Finding as founding. It is about actively selecting features in the landscape to develop further in order to form the basis for a design concept (Corner, 1999). What you find relevant at the site constitute the basis for the proposal. Kvisthöj (2008) interprets this as what you find should be architecturally relevant and serve an aesthetic purpose. She means that finding as founding can be compared with the use of a so-called field frame, a tool used by biologists to organize the inventory of a site (Kvisthöj, 2008). Hence, the field frame could be seen as a metaphorical tool that facilitates the designer in the decision of what might be relevant as a basis for a proposal in the process of finding as founding.

The field frame (Kvisthöj, 2008): The field frame is used throughout the design process, not just in understanding the site but also in understanding the working process and working methods. The architect put the frame over the inventory and analysis in order to frame how the landscape study is understood and executed. The intention is to understand how, with which resources and with what attitude, the study is performed. The field frame is further put down over the existing landscape. This is indicative of what the landscape study is headed for, what exists in the landscape and what the potentials are for the founding. The field frame is also placed over the design process to understand the purpose of the proposal, its development and purposes. The field frame is placed across the envisioned landscape to evaluate what it is and means; a guiding of what the proposal could, and what it should contain. Subsequently, the field frame is placed on the realization of the project in order to understand the principles of its realization (Kvisthöj 2008). Thus, the field frame works as a method to contextualize each stage of the project process.

The expression Finding as founding indicates that something that is found in the existing condition is the foundation for the future development, it shows how the place influences the design. What is founded in the landscape becomes an instrumental imperative that will guide the design process. This instrumental imperative consists of what is found in the landscape: processes and forces that work as agents in the landscape. These processes and forces are the foundation for the project. They are extracted and chosen from the landscape study by the designer in order to be transformed and steered by the designer. What is found in the landscape study functions as an initiation for the transfer from site to design and from design to realization. The instrumental imperative; what is found in the landscape, its effects and potentials, can be transferred into a design proposal that enhances certain effects (Kvisthöj, 2008).

Examples of projects that reflect this approach may include the collected works of the North American office Hargreaves Associates. Many of their projects have aesthetic expressions generated by on-site processes (Czerniak, 2006). The natural riverbank formations at the site acted as a point of departure for the design of the Guadalupe River Park. The riverbank formations were abstracted in the form, highlighting both the natural systems of the site and simultaneously revealing the artificial feature, the park features of the site (Czerniak 2006).

The field frame, used as a metaphorical toll in the design process (left). Guadalupe River Park/ Hargreaves Associates (above).

Another example of a project where natural processes have been taken into consideration can be found in the city Zuera in Spain. A terrace system along with the local river was constructed. This system manages the flood of the river through the use of permeable soil material, but it is also connects to a network of public places in the city. The dynamics of nature, here represented by the flood, were appropriated in order to link the natural processes with the site and simultaneously provide a social integration of the system into the city (Shannon 2006). The projects above take the natural processes on a site as a point of departure for the design, as in the Field operations mode. Landscape as ecosystem also means to use ecology as a model for developing strategies to address polluted sites and thus rehabilitate them. Examples on this can be found in the books Decamping Detroit (2002) and Manufactured Sites (2001) among others.
The High Line project in New York illustrates how Corners office Field operation focuses on characteristics of landscape urbanism such as flexibility, phasing and the synthesis of natural and cultural systems as well as finding as founding. For more information on the High Line project, see Kvisthöj (2008).

Natural processes are specifically addressed in the finding as founding concept, but I suggest that for example social, cultural and economical processes can be included as an instrumental imperative (Kvisthöj, 2008) as well, in order to encourage the synthesis of different systems. However, the method proposed by Field operations with a focus on these kinds of synthesis is contradictory. On the one hand, the synthesis of natural and cultural systems is advocated. This means not to analyse the city in the dichotomies of for example nature and culture. The LA River example discusses this on page 44. However, in order to synthesise natural and cultural systems, the distinction of each system makes a prerequisite for this synthesis. In order to operate on forces, as advocated by Field operations, a division of natural and cultural systems is in fact made, since the humans (cultural forces) analyses the landscape (natural forces) in order to decide how the natural forces could be orchestrated in order to produce different effects.

Contingency and resilience: Having ecology as a model for design further means working with unforeseen events, since the evolutionary processes of an ecosystem are not completely predictable. In landscape urbanism this contingency is regarded as a potential quality and is treated as an integral part of the design. Prominski (2005) means that contingency can be used in the design as element of uncertainty and surprise. It also generates variety since a regular visitor to a site could experience various things in terms of aesthetics and ecology depending on the stage of the park. However, this uncertainty is depending on a structure, a design of a strategy that can orchestrate and instruct the forces and processes working at the site (Prominski, 2005). The competition entry of Field operations for the Fresh Kills competition could illustrate this ambition.

Landscape as ecosystem also means an emphasis on resilience, discussed by Czerniak on page 188. A strategy that can orchestrate and instruct the forces and processes working at the site, as described by Prominski (2005), needs to be resilient, just like the resilient ecosystem that can handle and absorb change without being totally transformed. Muir (2010) means that in the design of parks this means a shift from using artificial methods to maintain a steady state of the park, to an attitude promoting the opposite of control and determinism, namely change and indeterminism (Muir, 2010). This attitude further call for adaptable solutions with less focus on static form: *opposed to architecture for the sake of architecture, it investigates the feed-back loops between architecture and the systems it is embedded in* (Andreas Ruby in Gausa, Guallart, Müller, Soriano, Porras and Morales, 2003 p.476). This enables a self-organization of the park, similar

Golden Gate Park in San Francisco was laid out on sand dunes, while envisioning *a notion of pastoral scenery* (Hargreaves, 2007 p.139). The neclection of the site conditions in the park design makes it unsustainable according to Hargreaves.

to the self-organization of an eco-system, which is necessary for long term sustainability. Large scale urban park design competitions, like the 2000 Downsview Park competition in Toronto, have transferred these ideas into proposals (Muir, 2010). Here, once again Parc de la Villette and Fresh Kills Park could be mentioned as further examples.

New working methods and approaches: The complex and process-driven way of viewing the city through the lens of ecology requires new contemporary working techniques and approaches according to Corner (2006). In order to describe and improve the understanding of the systems that affect the urban city, he mentions diagrams, maps or other image-based methods as appropriate instruments (Corner, 2006). The competition entries for Fresh Kills and Downsview Park with their phased diagrams illustrate this.

Landscape as ecosystem means to understand that all parts are interrelated; a change at the regional scale could mean a change at the local scale and vice versa. This puts a focus on the oscillation between different scales. (Choong Knutsen et al 2008) discusses how space-making processes can be biological, urban and social. This wide span of different kinds of processes calls for an interdisciplinary approach. The holistic way of approaching the contemporary city means a complexity that need to be approached with an interdisciplinary investigation of a site according to Corner (2006). Corner 2006) reflects on this as *a conflation of professional and institutionalized distinctions into a new synthetic art, a spatio-material practice able to bridge scale and scope with critical insight and imaginative depth* (Corner, 2006, p. 28). The landscape urbanism approach is to view the site in relation to the overall system of networks and processes. However, Corner also emphasizes the importance of the detailed, substantive, intimate scale *A good designer must be able to weave the charts & the strategy in relationship to the tactile and the poetic* (Corner 2006 p.32).

Near and far. Grasping the complexity of shifting scales.

Discussion: Landscape as ecosystem

Landscape as ecosystem is proposed to be one defining idea of landscape urbanism in this paper. The ecosystem acts as an abstract model for the city. This means a holistic thinking where each part of the city relate to the other. This metaphorical interpretation of an ecosystem further means a focus on process, synthesis, resilience and contingency. To further these characteristics, operational approaches such as interdisciplinarity, the design of processes and self-regulating systems that further flexibility are emphasised. This means to take departure from the processes on sites when conceiving a design. This has a possibility to synthesise nature and culture over time. To encourage the process of taking departure from processes on site, the concept of finding as founding and the field frame are introduced. The site research becomes important as what is found constitute the basis of a proposal. What is found needs to have architectural and aesthetical natural values, according to Kvisthöj (2008). I suggest that other values such as social, historical and economical also should be included as potential basis for a proposal.

To illustrate the holistically way of viewing the city through the lens of ecology, Kvithöjs (2008) interpretations of Corners ideas on ecology is introduced next. In the introduction to the chapter Landscape as ecosystem it was discussed how landscape urbanism views the city through the lens of ecology and thus perceive it as an evolutionary system. Kvisthöj (2008) elaborates on the idea of an evolutionary system. She means that Corners idea of ecology includes natural, cultural and urban issues in an overall intention to create working systems and relations between mankind and its surroundings. Kvisthöj calls it a metaphorical ecology. She means that the focus on ecology and processes is not just about the understanding of how the processes function and knowing how to work with them. The metaphorical interpretation of landscape as ecosystem also includes a holistic view which incorporates for example working methods. She clarifies this in a model, the life form, which is inspired by evolution.

The life form helps us understand how Corners idea of ecology means that each project; its content, form, natural and cultural qualities and the working process and creativity of the architect, could be holistically viewed as an organism that is subject to evolutionary forces and processes. As in evolution, this organism strives not only to survive but also to be successful (Kvisthöj, 2008). In a landscape urbanism context, this means resilience, being able to handle changes in the environment but at the same time be as specified and robust

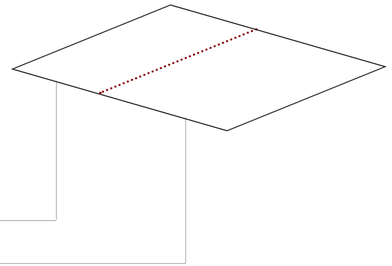
as possible. This acquires not only strategic processes but also form as described by Corner above. Landscape is understood as a consequence of its own processes and forces operating on it. These different forces and processes of the landscape generate effects and form over time. These effects can be material, physical as well as user-related (Kvisthöj, 2008). Kvisthöjs idea of the life form thus helps to illustrate how a project is contextualized by a holistical approach including natural and cultural processes as well as questions of content, form, working process and creativity of the architect. In an evolutionary context, the project needs to perform to succeed. This means to generate an array of effects concerning for example form and social values. However, it is not specifically elaborated on what the desired effects and consequences are. This is similar to the idea presented in the landscape as surface chapter. Leaving this kind of discussions and information out might be symptomatic for landscape urbanisms rejection of control by the designer.

Discussion: Landscape as surface and field and Landscape as ecosystem

The defining ideas of landscape urbanism, landscape as surface and landscape as ecosystem, should not be seen as opposites. At a first glance one might conclude that landscape as surface is about hard values and landscape as ecosystem is about soft values. This is not the case since both defining ideas promotes a holistic approach to the city. Landscape urbanism doesn't make a distinction between soft and hard values. Rather, the defining ideas complement each other in that they generate different models and strategies for addressing the dynamic city. The interpretation of landscape as surface and ecosystem means to see the city as a dynamic force. Hence, both defining ideas stress flexibility, bottom-up phenomena, synthesis of different systems and the rejection of formal compositions in order to address the contemporary city. However, the suggestions in which way these characteristics are fulfilled differ since the interpretations of landscape are different. This generates different concepts:

Landscape as surface mean a focus on framework, as described by Allen, and on layering as described by the surface strategies. Further, landscape is promoted as a structuring element as described by the staging of surfaces. Lastly, program is advocated in order to activate the surface as described by Wall. Landscape as ecosystem on the other hand means a focus on process, resilience as advocated by Corner and shifting scales as advocated by Corner and Shane. These concepts can at times be overlapping, to compose with programming is mentioned as a method to work with social processes within landscape as ecosystem. Further, the framework of Allen is similar to the evolutionary systems Prominski (2005) is referring to. However, I argue that the defining ideas of landscape urbanism generally produce distinct concepts respectively. The next chapter takes a closer look on how these concepts, like framework and program, can be transferred to strategies for a practical implementation.

In practice/
methodological approaches



The second and third chapter give a background to landscape urbanism and how the various interpretations of landscape means two ideologies of landscape urbanism, a metaphorical and operational interpretation of landscape, and lastly two defining ideas of landscape urbanism. The next chapter sets out to investigate what landscape urbanism means in practice. With the prior chapters as a background, I have noticed recurring ideas regarding methodological approaches, models and strategies of landscape urbanism. Additional literature and project analysis have confirmed these recurring ideas. In the following chapter, it is elaborated on how these characteristics could be transformed to working methods, models and associated strategies. This chapter has a twofold organization. First, methodological approaches and second models, strategies and the matrix, aim at bringing some clarity to the fluid nature of landscape urbanism. In each section, the result will be related to the prior results of the paper in order to motivate and contextualize them. Thus, the chapter will be somewhat of a summarizing character. However, the categorizations that are made will be further motivated by additionally referred material. A complete overview of landscape urbanism methodology is not provided; rather an attempt is made to introduce a discussion on landscape urbanism and what it could mean in practice. This has a potential to act as a point of departure for a critical analysis of the landscape urbanism methodology. First, an overview of the methodological approaches of landscape urbanism is given. Second, models and strategies.

What does landscape urbanism mean in practice?

Dagognet declares in (Farsø p.3) that: *Landscape is a method, one finds less in it than through it.* But how can landscape function as a method? Can the idea of landscape as method be transferred into a working method and subsequently into form? The wide approach of landscape urbanism can sometimes make it problematic to decipher what it means in practice, what really is landscape urbanism in the practical work? The methods of landscape urbanism are fluid and recurrently modified depending on technological and scientific progress as well as overall changes in the urban realm. Lindholm (2008) writes about the nature of landscape urbanism: *On its way, it sucks up relevant knowledge, from whatever discipline, to solve its tasks and to develop a dynamic professional competence* (Lindholm, 2008 p.5). These recurring updates regarding the methods of landscape urbanism are left out in this paper. Rather, the fundamental methodological models, concepts and methods of landscape urbanism will be described and discussed, where as the fine tuning of the methods, such as new technology etc., will hopefully be revised with recurring intervals in the practice.

Visions of Corner

James Corner (2006) addresses the many uncertainties associated with the transformation from theoretical ideas of landscape urbanism to form. How are the many complex layers of landscape urbanism transformed into an operational strategy? Is it possible to create design concepts from landscape urbanism's wide range of scales and its desire to involve a variety of actors in the process? How it is even possible to work as a planner in today's cities where the development is largely driven by economic interests or processes beyond the designers control? Corner (2006) admits that landscape urbanism contains many uncertainties concerning its practical application. Though he believes that landscape urbanism questions traditional methods and techniques and offers an alternative to them. He promotes new concepts and representation techniques and suggests ways on how these can be applied: *The possibilities of vast scale shifts across both time and space, working synoptic maps alongside the intimate recordings of local circumstance, comparing cinematic and choreographic techniques to spatial notation, entering the algebraic, digital space of the computer the while brass around with paint, clay, and ink, and engaging real estate developers and engineers alongside the highly specialized imaginers and poets of contemporary culture* (Corner 2006, p.32).

In practice/
methodological approaches

Corner suggests that these listed activities are part of an urbanism of such a synthetic character, such as landscape urbanism. However, he believes that the current state of landscape urbanism is not able to deal with this complexity. He claims that it is in the development of techniques and methods we should focus (Corner 2006). The activities listed by Corner are quite abstract. They rather describe a vision about developing a broad variety of tools and approaches to apply in the design process, rather than hands-on methods, I suggest.

Contextualization, complexity and contingency

Gunilla Lindholm (2008) summarize the nature of landscape urbanism by concluding that landscape urbanism enhances contextualization, complexity and contingency. She asserts that landscape urbanism is a concept, *an abstraction, a meta-level* (Lindholm, 2008 p.4). This enables the landscape urbanism discourse to engage in a wide range of questions concerning contemporary urban conditions: social aspects, infrastructures, different scales, multiple interests, frameworks, visions and imaginations, objects and spatial conditions. This calls for an interdisciplinary framework for the urban discourse, as suggested by Corner (2006). This interdisciplinary framework of landscape urbanism is characterized by contextualization, complexity and contingency, according to Lindholm (2008). Contextualization, the grasping of complexity and contingency are important tools in working with a project of landscape urbanism. Contextualization means to put a site in context, which is achieved by asking questions beyond the traditional inquiries in approaching a site. Further, contextualisation means to see dynamics in natural and cultural processes and to explore the relationships between different scales. Complexity means to understand, promote and keep the complexity of a site throughout a project or a process. Contingency means the understanding of complexity within different material, social, natural or cultural systems. It also stresses the indeterminism of these systems, how they react and evolve in time and space. To be able to manage these three characteristics, interdisciplinary work and thinking is advocated (Lindholm, 2008). Contextualization, complexity and contingency are illustrated by the defining ideas of landscape urbanism in the prior chapter. In this chapter the meaning of these characteristics in practice is elaborated on.

Methododlogical approaches of landscape urbanism

The categorization of the different methodological approaches to the design process was made after extensive readings and project analysis. The choice of working methods and approaches were derived from recurring terms in texts regarding landscape urbanism. The approaches that I have found were also used in projects which were analyzed by the author. The following general methodological approaches were recurring in projects as well as in landscape urbanism writings:

Approach to site
Interdisciplinarity
Learning as a vital part of the design process
Representation as tool in the design process
Designing systems and strategies as opposed to finished form

Approach to site

As illustrated in the landscape as ecosystem chapter the Field operations approach means a model that includes different kinds of processes; natural, cultural, social, economical among others. The challenge is to analyse the landscape and decode its components, processes and forces and how these interact. By knowing the different landscape mechanisms, their effects and the interaction of effects, the designer can define strategies in order to manipulate the desired development of the site (Kvisthöj, 2008). I find that to be able to do this, the site research needs to be thorough and extend beyond the conventional frames of site research. This means to analyse the site from several different perspectives such as social, ecological and economical. These new perspectives also include analysing the site over time. Having landscape as a model enables this, since the idea of landschaft includes natural and cultural processes over time. Wall (1999) among others stresses contingency and the ability to foresee change. This confirms the need for a new approach to site where not only the history and present features of the site are mapped and analysed, but also the making of future scenarios. Anita Berrizbeitia (2007) agrees with this. She means that working with an ecological approach, as landscape urbanism advocates, means a more complex approach to site. She concludes four different shifts in the approach to site regarding an ecological approach. First it means working with material and processes inherent at the site rather than introducing new material. Second it means a broad approach on the site research. Third it means to perceive history as a process in

itself. Fourth, working process-based means the realization that the designer's own contribution to a site is just one agent of many in the evolvement of the landscape (Berrizbeitia, 2007). These four shifts are elaborated on below.

Working with material inherent at the site: The first shift means working with material inherent at the site as opposed to introducing new material according to Berrizbeitia (2007). The material on site is dynamic, which puts a focus on understanding these materials and working with their processes as opposed to working with a landscape's final form (Berrizbeitia, 2007). This is akin to the Field operation approach where the focus is on the design of the processes on site, rather than on the design of a final form. Berrizbeitia (2007) suggests that rather than introducing new forms to the landscape, the material and forms are found on site. Form and organisation are derived from systems already inherent on site. I find that this is equivalent to the approach of James Corners idea of finding as founding and Kvisthöj's (2008) idea of the field frame and the instrumental imperative. Berrizbeitia (2007) means that this constitute a shift from working with: *compositions based on notions of balance, regularity, and hierarchy to working with systems, natural or man-made, and the various ways in which they can be organized and distributed as fields, gradients, matrices, corridors, etc., to facilitate connectivity, ecological functions, program, and the perception of phenomena* (Berrizbeitia, 2007 p.178).

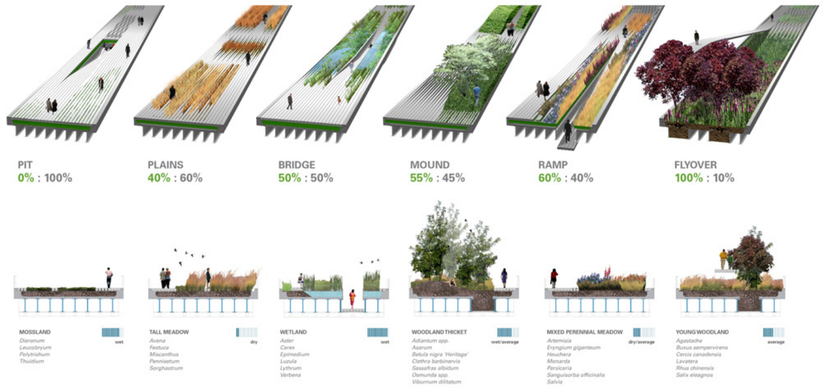
The idea of working with inherent material is also presented Chemetoff (Farsø) who means that an important part of conceiving sustainable places lies in the development of a more positive attitude towards the sites that landscape architects currently engage in, such as infrastructural sites from the 1960s and 1970s. He means that we should study these environments with the same open and positive mind as we listen to the music from the 1960s and 1970s, meaning that we shall be more positive about our recent past and find value in what already exists (Farsø). The approach promoted by Chemetoff is evident in projects of post-industrial sites such as Emscher Park, where the remaining structures of industrial sites, mainly coal factories, are used as a basis for the design of new parks (Hargreaves, 2007). Even projects of a smaller scale, such as The Urban Outfitters Headquarter in Philadelphia, designed by D.I.R.T, illustrate how recent history and its inherent material can be re-used and thus re-valued. Margolis and Robinson (2007) describe how the forecourt of Urban Outfitters Navy Yard headquarters in Philadelphia was to be designed by D.I.R.T. Located on a historical shipyard, the office initial approach was to complete an excavation of the site in order to find out what was hidden beneath the surface. This process revealed a material

Urban Outfitters Navy Yard/ D.I.R.T

palette of the Navy Yard, rail tracks, concrete, rusted metal and industrial residue. The material found in the excavation was subsequently used as paving, filling of the joints and also used in tree plantings (Margolis and Robinson, 2007).

The examples from Emscher park and D.I.R.T both illustrate quite an architectural and structural approach. The point of departure is the structural and material features of the site. Other examples illustrate a more landscape ecological approach, where the ecological and landscape architectural features are used as a point of departure. The processes and their effects are built upon. Examples are mentioned in the Landscape as ecosystem chapter on page 107. Additional examples include the Fresh Kills competition entry of Corner which showed a focus on the integration of natural and cultural processes. Further, Gray (2006) presents how the hydrology of the site was used as a point of departure to a large extent in the Downsview park competition.

A broad approach on site research: Berrizbeitia (2007) means that the second shift in the approach to site regarding an ecological approach holds a broader approach on the site research than in the traditional formally oriented landscape architecture. Today, site is considered more complex. Thus, the research includes more than an ecological inventory or visual registration of the site. It extends to such as economi-



cal forces operating on and around the site, demographics, politics, social patterns and processes, etc. The site research also includes how these processes and forces interrelate, in past and present, creating a holistic view on the site and thus a deeper understanding and contextualization of it. Consequently, the site research provides an understanding of why and how the site performs as it does in addition to its present visual appearance (Berrizbeitia 2007). The founding made by Kvisthöj (2008) is similar to Berrizbeitia's (2007). Kvisthöj (2008) presumes that according to the practice of Corners office, the role of the designer has broadened, especially when it comes to site research. The designer is to be investigating, analysing and proposing. The architect should further be both intuitive and rational while executing the site research. The site research is apprehended as more than just about the site in itself, it extends to the comprehension of social forces operating on the site, such as the everyday use of the site. Kvisthöj (2008) describes how this was done by Corners team in the site analysis of the High Line. In addition to the traditional site analysis activities, such as registering infrastructural links, vegetation etc, one additional study combined experienced relationships of the site. The study included the experienced relationships between the morphology of surrounding buildings, wind, light, sound, water conservation, drainage conditions and vegetation. These relations were depicted as different microclimates along the High Line. They subsequently acted as an instrument when the characters of different areas of the High Line were defined by the design team. A flexible paving system, the Agri-Tech paving system was developed in order to define these different characteristics of the areas along the High Line (Kvisthöj, 2008).

History as a process in itself: Berrizbeitia (2007) means that the third shift in the approach to site regarding an ecological ap-

James Corner Field Operations/
The High Line.

Approach to site means to know the many layers of a site, e.g the ecological historical layers

proach means an approach where history should be perceived as a process in itself. Approaching history means more than the use of formal and stylistic references. Site is profoundly characterized by its history. Knowing the history of a site enables the understanding of the variety of forces operating on site. Thus an "existent condition" plan of a site should be supplemented with information about how and why the site functions as it does in its present state: *What was it before it became a hunting ground, a steel mill, an agricultural field? What are its geologic origins, and how have patterns established by geology been transformed, or made legible on the site? Which are the persistent qualities of the topography, vegetation, and drainage? What has adapted to change? What hasn't? What are those external events, in economics, politics, and environmental regulation that affect the site and have given impulse to its development?* (Berrizbeitia, 2007 p.179).

Marot (1999) also emphasises the importance of knowing the history of a site and compares the approach to a site with a conversation: *One cannot participate in a conversation without listening to what has been said before, listening to what others have to say, and speaking only to keep the discourse going* (Marot, 1999 p.50). This engagement in site is further advocated by Michel Corajoud (2000) who means that designers need to ask several different questions about the site: What made it look like it does? What forces have been operating on the site? What forces are currently operating on the site? These questions need to be asked while the designer is following his intuitions in making a design formulation. During this process of design formulation the designer can be inspired by the site and its traces of past occupancy. At the same time the concept of landscape should be revaluated, in which the landscape is recovered as more than a cultural construction or idea. The idea of landscape should be widened: *The things of the landscape have a presence beyond their surface* (Corajaoud, 2000 p.4). This means the ability to view the site in the context of its historical layers.

The designer as one agent of many: Berrizbeitia (2007) means that the fourth shift in the approach to site regarding an ecological approach means that process-based practices of landscape architecture realize its own contribution as just one agent of many in the evolvement of the landscape. This is grounded in the interpretation of landscape as ecosystem and field, which means a focus on dynamic conditions, contingency and open-ended systems. Hence, Berrizbeitia (2007) assumes that the catalyst of the design is primarily the formulation of the purpose of the project rather than the visualisation of a final form. Marot (1999 p.51) makes a similar conclusion as Berrizbeitia by stating that there is *an attitude of incompleteness; rather than building a final solution, seeds are sown, questions raised, and potential structured. In so doing, a designer may also highlight the stages of implementation and the measures required to sustain or develop it. Making these processes and stages visible not only facilitate execution but also invites the reading and interpretation of others who use and invest their time in such places.* This is similar to Allen's (1997) idea of the need for the designer to give up a certain amount of control when addressing the urban conditions.

Discussion: Approach to site: I find, that the four shifts in the approach to site as presented by (Berrizbeitia, 2007), indicate a thorough engagement in the site, its history and possible future. This means complexity.

Complexity: Landscape urbanism presents a challenge. It means only by knowing a site and by projecting its future is it possible to design with an ecological approach and further sustainability at all levels. Analysing the site from several different parameters as advocated by landscape urbanism is complex, which Corajoud acknowledges. Corajoud (2000) proposes that all the information drawn from the site could collide with other parameters concerning the program of the developer for instance. This can be confusing: *The more you analyze the givens of the site and the client's proposal, the less capable you will be to act. If you are not careful, you can get mired in the complexity of a landscape situation!* (Corajaoud 2000 p.4)

Hence, it is important to encourage distance from the site to get perspectives on what is important and not according to Corajoud (2000). He means that designers should have a dialogue with the site through the oscillation between work on the physical site, the analysis and the design formulation. Ideas should be implemented and tested on site: *Once your first decisions are engaged and stabilized, you must go back on site to test the validity and measure the distance between the early steps of your design and its adaptation to your site. If you neglect this recommendation, the design that you started will quickly unravel from reality. To intervene in the landscape, in this world of complex interrelationships demand knowledge, touch and control. If your work is too inattentive, what you propose has all the possibility to be rejected or to appear despite all insolent and discordant* (Corajoud, 2000 p.4).

This also implies an importance of associating the different scales of the landscape, from the global to the local. This is akin to landscape urbanism emphasis on bottom-up phenomena and shifting of scales as described in the defining ideas of landscape urbanism chapter.

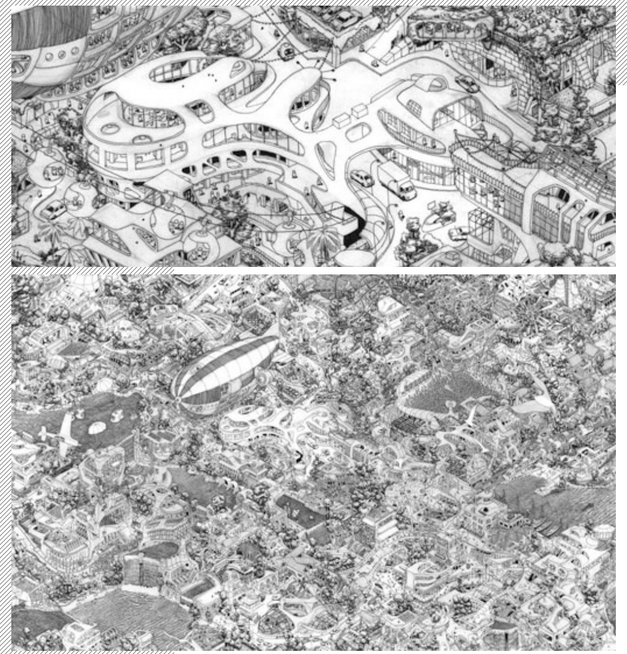
Practical implementation: The practical consequence of this approach is to include a wide range of expertise, which could

be a financial liability in some projects. However, within landscape urbanism it is suggested that a thorough site analysis will lay the ground for a proposal that considers all perspectives and is able to anticipate future change, which thus generates sustainability. This requires a long-term thinking and investment in interdisciplinary teams, which risks being reduced in the planning process and the practical implementation.

The finding as a genius loci?: In conclusion, the approach to site advocated by landscape urbanism means a quest for knowledge from different perspectives. It also means the challenge of making decisions on what might be valid as the Finding of the concept finding as founding. The Finding as founding as described by Corner describes an approach which is not strictly rational. It has an intuitive dimension to it, further described by Kvisthöj (2008) in the concept of the Life form. The idea of the Imaginary as described by Corner (2006) also implies an indescribable level of the design process. What one finds in the landscape is the founding for the project, according to Corner (2006). What this Finding constitutes, is entirely up to the designer to choose by using the fairly undefined methods of Corner (2006).

I suggest that even though landscape urbanism rejects the idea of genius loci as a remnant of the picturesque perception of landscape, the idea of finding as founding and the imaginary have similarities with the very idea of genius loci. Genius loci was described by Alexander Pope: *Consult the genius of the place in all; That tells the waters or to rise, or fall; Or helps th' ambitious hill the heav'ns to scale, Or scoops in circling theatres the vale; Calls in the country, catches opening glades, Joins willing woods, and varies shades from shades, Now breaks, or now directs, th' intending lines; Paints as you plant, and, as you work, designs.* (Alexander Pope cited in Anderson, A. and Shea S.J.).

However, the holistic site approach advocated by landscape urbanism broadens the perspective from the local to the global which the idea of Genius Loci doesn't. The holistic perspective includes the making of future scenarios, and includes ecological, social and economical process over time. Thus the question of site extends beyond the physical site. Berrizbeitia (2007) states that the ecological approach to site as presented in the four, means a new attitude towards the meaning of place. The notion of place has become complex: *An inclusive attitude toward history, ecology, recreation, and perception has transformed place from inert visual scene into a historically contingent process always in state of formation* (Berrizbeitia, 2007 p.179). This notion of place discussed by Berrizbeitia (2007) differs from the more narrow approach of genius loci. However, Pope advocates that the Genius loci of a site should be consulted before taking action which is not totally opposite of the concept of finding as founding.



A new complex urban morphology requires an interdisciplinary approach...

Interdisciplinarity

As discussed in the chapter landscape as ecosystem, an important step towards being able to handle the synthetic nature and complexity of landscape urbanism is to work interdisciplinary (Corner, 2006). These hybridized activities where artistic disciplines, landscape architecture, architecture, urban planning etc. are integrated with scientific disciplines such as forest sciences, geography, sociology, landscape ecology, etc. is not new. Interdisciplinary teams are better suited to handle the amount of information and holistic considerations that must be taken into account in a project, is a nowadays standard procedure in large scale projects (Bach, 2008). I suggest, this doesn't rule out the possibility to work in an interdisciplinary way in small-scale projects. The amount of complexity of a project mustn't necessarily depend on the scale of a project.

Hybridization: Lindholm (2008) holds that the most evident contribution of landscape urbanism is the model of bringing together in many aspects: nature and culture, urban and rural, small and large scale, design and planning, public and private issues. The hybridizing character of landscape urbanism means including new hybrid typologies in the urban morphology, like deserted factory

plots and undefined space along infrastructural apparatus (Bach, 2008). These new typologies in the city are dominantly undefined; the boundaries are more porous than in the traditional city. The conventional division between typology and discipline can not be traced. To address these new hybrid typologies, a hybrid of professions is needed. Hence, landscape urbanism advocates an interdisciplinary approach as described by Gray (2006), Weller (2007) and Corner (2006, 2010) among others. Within this interdisciplinary approach, the concept of landscape is of central importance as a unifying aspect (Bach, 2008).

Bridging the gap between planning and design: Landscape urbanism stresses the importance of bridging the gap between planning and design, by working with shifting scales as mentioned by Corner (2006). Richard Weller concludes that: *Landscape urbanism warrants serious discussion because it alone seems theoretically prepared and practically capable of collapsing the divide between planning and design. This also entails a compression of the divisions between architecture and landscape, between fields and objects, between instrumentality and art* (Weller, 2006, p.71).

Andersson (2010) also addresses the issue of planning and design. He proposes that the discourse and controversy surrounding landscape urbanism has not been as evident in Europe as in the USA. This is because landscape architects traditionally have been more integrated in large scale planning in Europe than in the USA. According to Andersson (2010 p.80) in Europe: *landscape architects have always been deeply involved in planning issues, more so than in the liberal and market-oriented USA. For quite some time, there has been a clear tendency of European landscape architects to engage in contextual understanding, planning issues, urban politics and strategies instead of just site design.* He further discusses that a challenge for landscape architecture is to overcome the divide between design and planning. There is a traditional preconception within the discipline that small scale projects are a subject for design and large scale projects are a subject for planning. Overcoming this division of planning and design could, according to Andersson (2010), mean a potential for landscape urbanism to engage in questions of design.

Lindholm (2008) asserts that landscape urbanism already suggests the merging of planning and design: *Landscape urbanism brings together knowledge from architecture, landscape architecture, urban design, urban planning and landscape planning* (Lindholm, 2008 p. 4). Lindholm (2008) suggests that the ability to combine knowledge from different sciences, to understand scale, relations and connections has been developed in the academy of landscape architecture and landscape planning during the years, but hasn't been fully completed in practice.

Discussion: Interdisciplinarity: The separation of planning and design can partly be explained by a traditional separation, but mainly because of the organisation of the public sector: *built in a dualistic way, where comprehensive planning and environmental protection have a close relationship on the one hand, and where urban design and public art have a close relationship on the other hand, neither with much contact with house building and town planning architecture* (Lindholm, 2008 p.3).

Lindholm (2008) further holds that the dichotomy of planning and design is partly due to the academy's inability to fully understand the shortcomings of the separations of planning as design. Traditional division of planning and design, landscape architecture and architecture etc. will take time to overcome: *Even if both architects and landscape architects, designers and planners, are well aware of the interdisciplinary character of their occupations, this means scarcely anything else than that each profession have constructed its own separatist way of handling manifoldness of information* (Lindholm, 2008 p.5) Lindholm (2008) argues that this in turn leads to an unfruitful competition between the disciplines as opposed to a bridging of the specializations in teams better fit to produce sustainable solutions. Since the division of the disciplines have been going on for some hundreds years, the hybridization and synthesis proposed by landscape urbanism might need some time to develop in practice (Lindholm, 2008).

Lister (2007) notes how interdisciplinarity is currently favoured in large-scale competitions, like Downsview Park and Fresh Kills. But, in the practice and every day life of a designer and in the planning

and management structures, the *top-down, rigid, homogenous, and static* processes are favoured, according to Lister (2007 p.47). Further, Lister (2007) means that institutionalized planning, which influences and dictates the conditions for a large amount of the practitioners within the architecture disciplines, favours a science-based deterministic tradition. This counteracts the interdisciplinary approach since each science is treated exclusively, without context: *Ecological science is an essential tool, but when employed without contextual knowledge or social values, science is an insufficient basis for park design* (Lister, 2007 p.51).

Interdisciplinarity means giving up hierarchies: The merging of disciplines favours a model where hierarchies are diminished. I propose that this could further be related to Allen's (1997) idea of the field phenomenon like the flocks, crowds, grid and mat as described in the Landscape as Surface and field chapter. What unites the field phenomenon are a belief in self-regulating systems, bottom-up phenomena and a non-hierarchical order. Hence, these ideas presented by Allen are at an abstract level similar to the ideas of a non-hierarchical interdisciplinarity.

A potential to hybridize theory and design: Working interdisciplinary means a wider palette of knowledge and methods to choose from according to context and circumstance. Lindholm (2008) recommends that a merging between the disciplines need to take place at several levels, in practice as well as in theory, which is partly going on. She means that landscape urbanism brings the disciplines together even at a theoretical level, as well as bringing practice and theory together. Theorists within the landscape urbanism framework are engaged in practical issues, as shown in The Landscape Urbanism Reader were all texts are written by practitioners. *In this way, we could also see a knowledge building that is not separated between practical activities and theoretical activities. Maybe a landscape urbanistic 'designerly research'* (Lindholm, 2008 p.6).

Consequences of interdisciplinarity, summary: I see the interdisciplinary approach of landscape urbanism as a consequence of the emphasis on the synthesis between nature and culture. When elements traditionally associated with the urban realm interacts with element traditionally associated with nature, new hybrid typologies evolve. To address these hybrid typologies, it is necessary to adapt an interdisciplinary approach. With this approach, synthesis takes place at several levels. It takes place between the traditional dichotomies nature-culture, urban-rural etc. It also takes place between the professions engaged in the forming of our cities, the wide spectra of scientists, architects, landscape architects, ecologists, artist and writers among others. The product of these synthesises are an approach, better designed to address the contemporary city as it can perform over different scales and traditional areas of expertise. Other products are new hybrid methods and technologies which intertwine natural and human cultural systems as well as the knowledge from different fields like ecology, architecture, planning and landscape architecture. The *designerly research*, as described by Lindholm (2008, p.6), illustrates this potential. These new techniques and working methods that might be generated from an interdisciplinary approach have a potential to render the working methods more effective. The generation of new methods and techniques could further help motivate the investment in interdisciplinary teams and a long term thinking.

Learning as a vital part of the design process

Learning is in a way an outcome of the condition discussed above in the interdisciplinary section. New typologies require new techniques and new working methods, such as an interdisciplinary approach. Since each project is regarded as a complex field, subject to a field operation, one needs to adjust the working methods according to the conditions of the site. Therefore, models like modernism with fix data and measurements are no longer valid in the context of landscape urbanism. The uncertainty of ecosystems and living matter is a big challenge for designers. No matter how much knowledge of a site one acquires, there will always be an indeterminist factor. Lister (2007) concludes that since designers no longer can follow Ian McHargs ecological determinism "nature will follow the way", human culture and natural systems will interact and will be seen as a unity or a hybrid activity. This hybrid activity doesn't have any imperatives, such as McHargs model. Rather, it means a more fluid approach according to the circumstances on site. This involves learning about the site, and an exchange of knowledge between different disciplines. Learning also means revaluating the character of the design process as an exclusive activity. The design process will be: *a process of discovery, design implies intentional shaping, manipulation, and (re)creation. In the urban ecological context, it also means recovery of something that has been lost–if not the precise forms of ecologies past, then an attachment to landscape, to nature's rhythms, to place. This process must necessarily be creative and engaging of local people, collaborating in a learning journey based on continual adaptation* (Lister, 2007 p.48).

Lister (2007) argues that this doesn't imply that designers should give up designing, planning and managing rather; Lister (2007) suggests that designers should use a variety of

approaches and experiments. She states that: *Good ecological design requires a diversity of tools, techniques, and methods. Learning becomes a central goal, leading ideally to continual improvement in design, planning, and management–to long-term adaptation* (Lister, 2007 p.46).

An interest in learning and the accumulation of new knowledge in order to be able to address a specific site in an appropriate way is advocated within the landscape urbanism discourse. A tool in the process of accumulating knowledge might be the field frame, as discussed by Kvisthöj (2008). I interpret the field frame as a kind of a meta-tool which will help the design team to be aware of the design process and to be aware of the thoughts and conclusions that are drawn by the designers. Hence, the field frame could act as a registration of the knowledge that is accumulated during the design process.

The design-process as a learning process has two sides. First in the aspect of learning in the design and analysis process were the field frame may act as a substantial tool. Second in the process of communicating a project through information campaigns and through public participatory processes.

Participatory process as a two-way learning process: Participatory processes means a possibility to exchange knowledge between the public and the designers. A vivid example of how a project can be communicated is the subsequent development of the Fresh Kills competition. The winning entry of Field Operations included a public outreach program *designing advertisements for the city's website, widely disseminated posters for public meetings, transformable project logos, and graphics for billboards, bus ads, and even the side of Department of Sanitation trucks. These measures are intended to generate a high degree of public interest and participation in the master-planning process and stand for a park in planning, one yet to exist, in recognition of the crucial impact that the legibility of the park and its operations will have on its future life* (Czerniak, 2007 p.226).

The campaign aimed at getting opinions on the development of the park in order to communicate the design in the public and therefore to further its resilience. Hence, the campaign could be seen as part of the design synthesis since it was complementing the site research, I argue. Lister (2007) describes how the process of design means learning about the site and opening up for participatory process. Lister (2007 p.51) advocates an inclusion of social, cultural, economic and political dimensions in order to further sustainability. *Local people should collectively decide which of the many possible futures they want, attainable through choices, trade-offs, trial and error, learning by doing, and flexible management. The designer's role in such a process becomes one of a wise facilitator.* I argue, that this role of the designer must be seen as complimentary to the role of the designer as designer of space. The designer should not be diminished to keep the protocol of process. Corajoud (2000) is also enhancing the importance of opening up the process in order to comprehend the site: *open all windows on the space and time of the design; make this practice as transparent as possible in order to understand its sources, dynamics, modes of resolution and history; finally, give up the romantic position of the isolated artist in the secret of his studio and widely explain yourself on the genetics of your design.*

Discussion: Learning as a vital part of the design process: Lister (2007) acknowledges that few municipalities are ready to pay for experiments and possible failure. Yet, allowing for small scale experiments could mean that recurring design mistakes would stop, since experimenting means learning from the mistakes. I believe this furthers creativity as each project means a new possibility to learn, as opposed to using old standard models in a routine-like mode.

Landscape is ever-changing, thus a fix formula for addressing it is not a relevant approach. Rather, learning is essential in order to understand the complexity of a site and to be able to contextualize it. However, agreeing upon using the field frame as a tool for learning in a project requires more time and money in relation to a project budget. It is a question of long term perspectives and investments that might prove difficult to motivate for clients and stakeholders.

In addition to having the Field frame as a tool in the learning process, representation can be a valuable instrument. As described in the Defining competitions chapter, representation is used to show dynamics and complexity of projects. Within landscape urbanism, representation becomes a tool in understanding and learning from the project during the design process, not just communicating it externally. Hence, the representation acts as a catalyst for both learning and design.

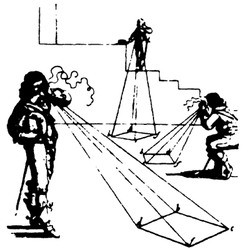
Representation as a tool in the design process

The revaluation of landscape within landscape urbanism means to enhance dynamics, interrelations and process. Landscape is upgraded from being representational to being operational, as discussed by Corner (1999). This requires new methods of representation in order to depict the dynamic conditions. The shift from landscape as a pictorial vertical image (object) to being viewed as operational and horizontal (field) was proposed by theorists like Stanford Kwinter and later James Corner (2006). Alex Wall (1999) implies that landscape should be considered as horizontal and best apprehended in maps and plans, not as a vertical frozen image. This is similar to landscape urbanism idea of the revaluation of landscape as surface and field rather than as a back drop to architecture.

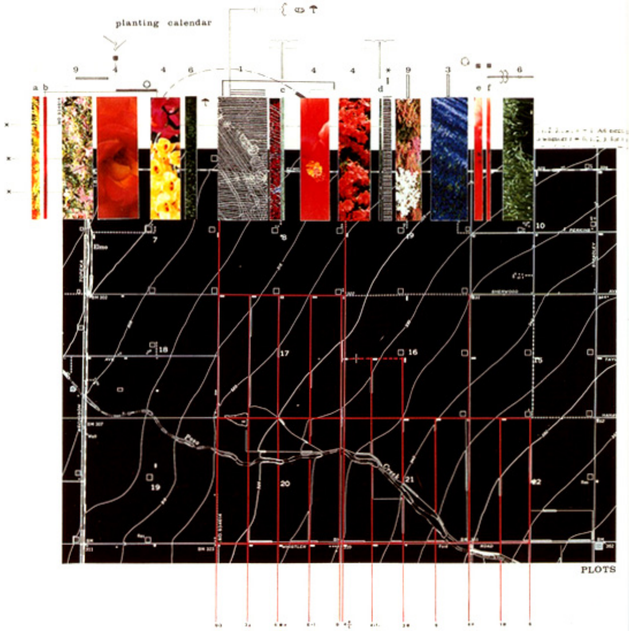
Representation as a hybrid practice: Distinguishing for landscape urbanism is the belief that representation means more than communicating a proposal; it is a hybrid practice where representation, such as diagrams, can work as tools in the working process as well as to communicate ideas. The graphics illustrate the interaction of nature, culture, processes and patterns. Within landscape urbanism, representation doesn't have to be formal. Rather, the informality can encourage and be inspired by the designer's intuition and subjectivity. Kvisthöj (2008) describes how Corner labels representation as the operating field. The operating field should reflect both the work of the architect, the project process as well as the landscape. Thus, the operating field has a synthetic character, but it should also work as a trigger for the design process. Allens discusses the potential of representation as a channel through which *any communication with architecture's outside must travel* (Allen, 2003 p.162). The diagram first acts as a vessel through which information from the site can be extracted and analysed. Second it is a tool in the designing of a site. Third it's an instrument in the communication of the proposal. Hence representation should reflect the dynamics of a site, the dynamics of the design process and the dynamics of the future development of a site. Allen (2003) sees phased diagrams are useful since they depict process, how the different processes interact and subsequent spatial and temporal consequences.

A non-hierarchical approach: Gausa (2003) means that using perspective as a method of representation, as in traditional landscape painting, suggests a hierarchical structuring of the world. This kind of representation and modern planimetry means a deterministic cartography, according to Gausa. He says that it is *univocal, total, exact and literal in its referent, but also in its procedures and in its outlines* (Gausa, 2003 p. 102). He implies that there is a shift to a more indeterminate *open, versatile, abstract* cartography (Gausa, 2003 p. 102). This shift implies a shift from the *observer* making the classical perspectives, to the *flaneur* making the modern plans, to lastly the contemporary e*xplorer* (Gausa, 2003, p.102).

The classical observer comprehended and represented space as a static and permanent concept. It was a fixed exact framework, observed by the human eye. The human eye was the reference of this framework; What was depicted was what could be seen by the human eye. The modern flaneur depicts space from a relative position, expressing a belief in a representation of exactness and predictability. Gausa (2003) proposes that the contemporary explorer rather explores space as complex and heterogeneous, thus non-hierarchical: *A multiplied, physical- and not always physical- space in a constant situation of latent flux and of simultaneousness between different messages and scales in which the traditional distinctions between city, nature and territory have increasingly lost their traditional meanings, blurred in progressively equivocal and overlapped geographies* (Gausa, 2003 p.102).

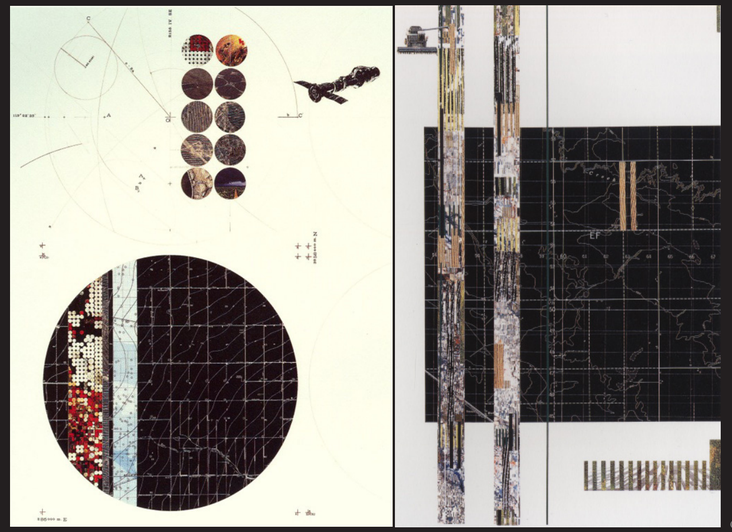


The classical observer (above). Representation in a landscape urbanism context. Planting calendar by James Corner.



Gausa (2003) advocates that the contemporary world with all its globalization processes cannot be comprehended by traditional static perception and representation. A new representation complements the old ideas of representation. This representation combines information from the site with remote information from satellites. It needs to show superimposed data displaying forces and flows over time as well as project future scenarios as opposed to presenting predetermined forms or models (Gausa, 2003).

Representation as a creative and creating activity: Corner (1996) suggests that the landscape study and the subsequent mapping of it should be seen as a creative and creating activity, illustrated by the concept of construe/construct and finding as founding. The subsequent presentation in diagrams etc. of the landscape study should be seen as a part of the proposal. Kvisthöj (2008) concludes that in the representation of the projects of Corner, the landscape study and the proposal are combined. The representation illustrates the transfer and relation between survey and form: the collages, diagrams, sections etc reflect the architects actions and understanding of the landscape study. The ideal for representation is a hybrid of different representation methods.



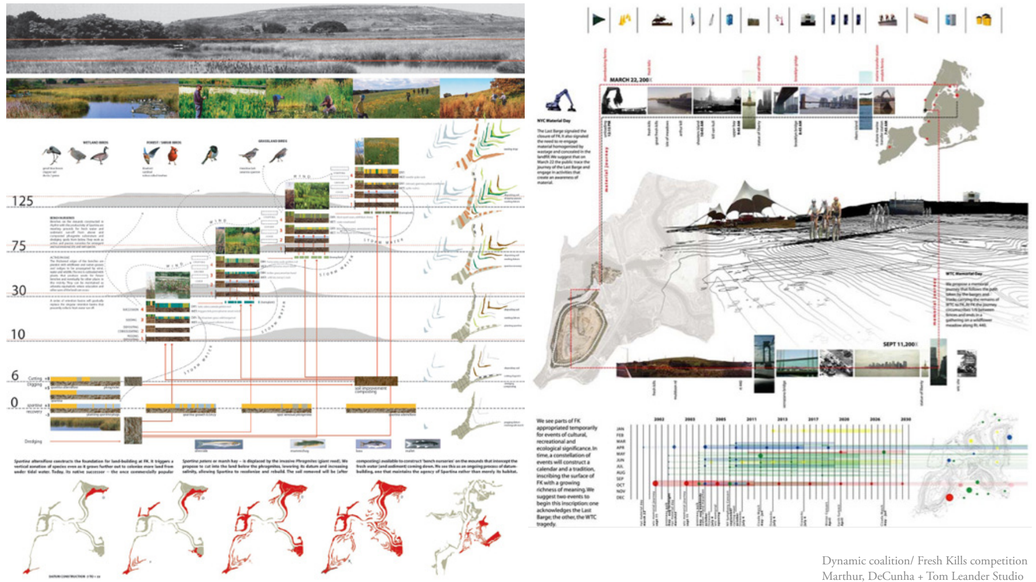
Collages by James Corner, unconventional representation.

It merges conventional, reliable designs and unconventional representation forms which may normally seem abstract and less convincing. Conventional representation methods are such as plans, topographical maps and aerial photos. Unconventional methods are such as perspectives combined with sections and photos, diagrams, notations, graphic signs and symbols, light and texture conditions. The conventional forms constitute a filter which ensures the effect, comprehensibility and usefulness of the alternative methods of representation. This generates a new hybrid form of representation (Kvisthöj, 2008).

Representing dynamic conditions: The view on representation within landscape urbanism manifests a distinct shift from Ian McHarg's way of using diagrams as a tool for understanding a site. Rather than separating cultural and natural forces from each other, Corners methods of representation aims at explaining the processes of change in the landscape while combining forces of nature and culture into integrating systems. Thereby representation shows how landscape is subject to both natural and social processes (Gray, 2006). This is achieved by the use of diagrams, as described in the section Defining competitions of landscape urbanism.

The diagram doesn't specify its context as fix as a site plan does. It may therefore be more appropriate for an open and indefinite holistic landscape approach in which the most complex parameters also requires a simplification, or a more clearer visualization in the form of a chart. Corners proposals for the competition for the Fresh Kills on Staten Island in New York, 2001 describes the hydrological systems, habitats, programs and planning strategies, which in turn were divided into a number of different phases illustrating the complexity of the project. This demonstrates the acknowledging of current processes and conditions while projecting possible future scenarios. The current conditions are included in the process of planning the site. These conditions are further revised and adapted in the subsequent phases in order to avoid the interim states of traditional planning where static plans become dated before they are implemented (Gustavsson, 2009).

Stan Allen (2003) also proposes the diagram as a suitable method for understanding and presenting a site in a dynamic way. The diagram shouldn't depict reality and its objects and system as they are, but rather foresee new organizations and specify relationships of the future. Allen (2003) means that the diagram has an explanatory function by clarifying form, structure and program in time and space for both the designer during the working process but also to communicate the project. The diagram shall thus describe the programs of site and how they are distributed in space and time: *Multiple function and action over time are implicit in the diagram*



Dynamic coalition/ Fresh Kills competition
Marthur, DeCunha + Tom Leander Studio

(Allen, 2003 p.162). Diagrams are thus not to be used as a tool attempting to describe reality as a scientific flow chart, schema or type, but rather suggest future action and possible formal configurations. Hence the diagram is also a *map of possible worlds* (Allen, 2003 p.162). Gausa (2003) means that this projective aspect gives the diagram an *operative nature*, capable of inciting processes and actions (Gausa, 2003 p.164).

Diagram and form: Gausa (2003) suggests that the diagram is both abstract and functional. By being conceptual and having a high degree of reduction they are abstract. At the same time this abstraction can be of an operational character by illustrating possible assemblies, relations, connections internal and external organisations, structures and use (Gausa, 2003). Allen (2003) suggests that the abstraction in the diagrams is not an end in itself, but is instrumental in that it helps the designer to understand the site and its future possibilities. Diagrams can further support multiple interpretations by the viewers, according to Allen (2003). Hereby, he sees the diagram as an abstract *machine* that doesn't resemble what it produces (Allen, 2003 p.162).

Allen (2003) describes the diagram as a graphic collection that illustrates the relationships between activity and form. Further it organises these structures and distribution of functions. Hence, diagrams are a suitable tool for understanding the complexity of the contemporary city.

Discussion: Representation as a tool in the design process:
Corner (1996) emphasizes that a map is never an objective depiction of reality, but rather the result of a subjective act of the map drawer. Therefore, the map-maker possesses power in how people perceive and look at the landscape. As with the finding as founding methods, it is about selecting what information you believe to be relevant to show, being aware of the subjectivity in the process of doing that (Corner 1996).

Corners (1996) idea on representation opens up for the intuitive and subjective, as seen in the collages of Corner (1996). I regard these abstract collages more suitable for internal communication rather than external, since they are quite abstract and introvert in their character. Their purpose is primarily for internal communication at the office, or as a way for the designer to illustrate the design process, from initial thought, to grasping the site and conceptualising a proposal. This intuitive approach thus opens up for artistry, alternative methods of representation and potential form generating possibilities. As explained by Kvisthöj (2008) these experimental and subjective representation methods might profit from being complemented with traditional representation methods when it comes to communicating a proposal.

Designing systems and strategies as opposed to form

In the chapter Defining ideas of landscape urbanism, it is discussed how the design of strategies and frameworks are stressed within landscape urbanism. This approach is considered more relevant in order to address the complexity and uncertainty to the urban realm. The design of strategies enhances the giving up of complete control by the designer. Rather, it calls for a self-regulating system as advocated by Prominski (2005). He reckons that a shift of focus from designing a framework rather than static image is essential not to "freeze" a site and its possibility to correspond to change and embrace natural and cultural processes.

In practice, this means that different processes in and around the site are identified and selected to work on. This work is done by giving instructions to the site by the setting up of a framework which will act as a grammar for the site. Since the material on site is organic and dynamic, an understanding of the processes on site is required. Therefore, the focus is on working with these processes, align them, orchestrate them, rather than on form (Prominski, 2005).

Allen (1997) illustrates the idea of a framework by stressing the importance of the relation between the parts as opposed to the form of each object. The relation of the parts, as with the Cordoba Mosque, constitutes the framework. Allen (1997) suggests that this kind of framework is more resilient and adaptive to future change. The examples of frameworks mentioned by Allen (1997), such as the Cordoba Mosque, demonstrate a focus on architectural frameworks. In a landscape architectural context, the OMA competition entry for Parc de la Villette, the competitions entries for the Downview Park and Freshkills competitions could be mentioned. In addition to these projects I choose to describe a large scale Dutch landscape architect project called Drawn from the Clay, designed by the Dutch office Vista in the 1990s.

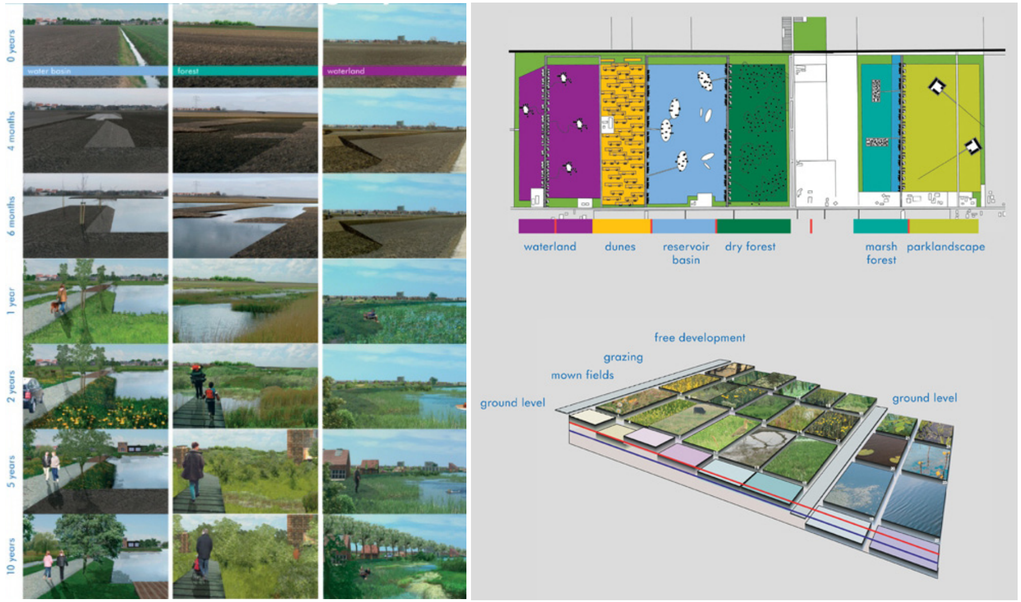
This project, discussed by Prominski (2005), proposes the design of an evolving system rather than the design of an ideal state of a site. Vista designed a system open for change, by setting the conditions on the site, anticipating its future change, by designing the instructions for the site. Thus, this project further illustrates how the idea of landscape from an ideal static image, a permanent state of balance and harmony as in the traditional landscape design, has altered into an idea of landscape of a more temporally and spatially fluid process, enhancing biodiversity. It might not be a unique approach, however this kind of projects demonstrate a respond to the challenge for landscape architects to designing systems of uncertainty, processes and relationships, according to Prominski (2005).

The underlying idea of Drawn from the Clay was to manipulate the water table of the site. A 500 hectare polder area was subdivided into 16 polders. On these, 5 different management typologies for vegetation on the strategic manipulation of the water table were developed. Each type had its individual regulation of how much water was added or drained. The result was five different biotopes, and thus five different types of landscape evolving at the polders. Each polder was given one of the five different typologies. The types ranged from the dry woodland, at some polders the grazing of cattle provided meadows. The polders were a high water table was regulated, peat marshes developed. Polders were a fluctuating water table was developed provided reed-filled marshes where as the flooding of the polders created ponds. Not only did this strategic framework provide biodiversity, it further presented a varied visual appearance, not by working with landscape in a scenographic static manner, but by allowing for a catalyst change of spatially and temporally conditions on the site. The system was designed for 80 years, but is according to Prominski (2005), it possible that it will evolve beyond the given timeframe. The Dutch landscape critic Michiel den Ruijter described Drawn from the Clay with the following words: *The special aspect of this method is that it does not seek to achieve a final ideal state. Rather, the planning sets out the natural and anthropomorphic parameters within nature will be allowed to develop. The result is to be a kind of self-evident order, marked by a contrast of rectilinear and organic forms* (den Ruijter cited in Prominski, 2004 p. 30).

Further Prominski (2005) argues that the project shows how landscape architects are able to handle complexity by the understanding of process, and how the forces of natural process can be incorporated in the designing of a complex system while accepting indeterminacy as an integral part of the project. However, Prominski (2005) states that the uncertainty is: *staged in a rigid structure which consists of specific instructions (for the watermanagement) as well as a formal order (the polder structure)*. (Prominski, 2004 p.33).

This means that the framework Allen is referring to, needs an element of control in that the designer controls a certain amount of the conditions of the site, like the water table level. Prominski calls this *Limited Self-Organization* (Prominski, 2005 p.33). The conditions or limits are set by the designer, together these constitute a framework. Within this framework processes and forces can operate.

Prominski (2005) means that designing a framework, a system, is of a fundamental task if a site shall be designed to be able to correspond to change and embrace natural process. Thus, a shift from the perception of landscape as a static classical picturesque image to landscape as a fluid concept is presented. Prominski (2005) mentions that this approach, a shift from object to systems was already presented Burnham



Drawn from the Clay/ Vista.

in 1968: *Where the object almost always has a fixed shape and boundaries, the consistency of a system may be altered in time and space, its behaviour determined both by external conditions and its mechanisms of control* (Burnham cited in Prominski 2004, p.33). Further Burnham, as Allen, refers to a new aesthetic that promotes the importance of the relations between the parts as opposed to focusing on the things themselves: *The systems approach goes beyond a concern with staged environments and happenings; it deals in a revolutionary fashion with the larger problem of boundary concepts. In systems perspective there are no contrived confines such as the theatre proscenium or picture frame* (Burnham cited in Prominski, 2004 p.33). Drawn from the Clay illustrate this shift, as well as Parc de la Villette, both projects with a formal structure enabling for self-organizational processes.

Discussion: Designing strategies as opposed to form: I propose that the designer's subjective aesthetic preferences are subdued within landscape urbanism. Rather, an ability to read a site, to extract relevant processes to include in a framework and to anticipate the future effects of the framework is highlighted. This has a subjective aspect, since the designer decides which processes to include and not. However, the mere aesthetic preferences, resulting in a static image, a fix form, are regarded unfruitful in contemporary dynamic conditions.

Landscape urbanism and design: The critics of landscape urbanism claim that the abstract character of landscape urbanism and its focus on process leads to a non-design. Andersson (2010) is sceptical towards the novelty of landscape urbanism and fear that landscape urbanism leaves out the fundamental ideas of design: *Landscape urbanism must not be blinded by its own ambition, and should also acknowledge the potential of design* (Andersson, 2010 p.83). I suggest that landscape urbanisms advocate for the design of strategies as opposed to form doesn't ignore the question of form. Landscape urbanism proposes a new way of regarding design.

Designing in a landscape urbanistic context suggests a focus on the design of process and systems. The frameworks should span across scales, from the local to the global. It must also be sufficiently robust to provide for continuity but also be adaptable for future changes to be sustainable. In conclusion, this working method means that the designer designs a self-regulating framework strategy for a site while envisioning its future. This means a new role of the designer, which implies that the designer cannot control the site entirely. Second, it means to work holistically, which in turns means a lot more information to process. This generates a challenge to decide what processes and features of the site to regard and disregard. Working process-oriented with an adaptive ecological approach as advocated by Lister (2007) further

provokes the challenge to decide upon what will remain stable/ permanent and what will become of a more dynamic and ephemeral character.

Further, Czerniak (2007) also highlights the complexity of choosing what systems and processes to enhance and encourage and which processes to disregard. The layers of history regarding ecology, culture and social factors together compose a complex layering. This is specifically the case with large parks, such as Fresh Kills or Downsview Park. Fresh Kills was transformed from wetlands to landfill to park and Downsview was transformed from forest to field to air-force base to park. *In the face of such layered complexity, designers must decide which conditions to address and which to ignore* (Czerniak, 2007 p.223). I suggest, making these kinds of descisions is a form of design. Czerniak (2007) holds that these layers might be controversial, as with the historic factory structure at Duisburg associated with the Nazi party during the Second World War. Lister (2007) acknowledges that there is often conflict over different values in the design process: *Indeed, the sometimes painful process of identifying, revealing, and acknowledging differences in values is essential to achieving a workable design solution. What programs to foster at the expense of others? Which species to protect and which to sacrifice?* (Lister, 2007 p51).

Landscape urbanism rejection of form doesn't mean to leave out the question of tactility, scale and material. I see it more as a rhetoric strategy to free the landscape from the image of a static image and to inject it with a broader meaning and potential. This rhetoric is part of landscape urbanism's ambition to lead the architecture disciplines further. Landscape architecture, planning, urban design and architecture is not merely form.

Methodological approaches-conclusion

The methodological approaches Approach to site, Interdisciplinarity, Learning as a vital part of the design process and Designing systems as opposed to form have all demonstrated an emphasis on long-term perspectives and a holistic outlooks. This could be an obstacle due to short-term thinking in form of dead-lines and financial delimitations. Designing for future changes, as well as being able to accomplish a design for the now, means difficulties. High pressure on deadlines and fast results counter-act the possibilities for a more process-oriented design. Corajoud (2000) has quite a pragmatic attitude towards design and process: *It matters to not confuse the design as process in time with the result of the work. All persons in charge of projects know perfectly well that what decides the end of their design is the deadline, agreed with the owner to start construction. Without this time pressure, the design might never be finished* (Corajoud, 2000).

I argue, in line with the pragmatic ideas of Corajoud that it is important not to forget about the practical outcome of a project in the process-based approach. Landscape urbanism enhances process rather than fix form. However, I emphasise the importance of regarding the now of the project as well as the future. Users visiting a site are quite indifferent to what the site looks like in 20 years. In the next section of the paper, examples of strategies will be given which aim at accomplishing the difficulty of designing for process and for the now. Examples will be given were the designer hasn't chosen between either process or form, but rather succeeds in incorporate different kinds of process and letting process and form influence and generate each other.

In order to manage the complexity of designing in a landscape urbanistic way, I see that the interdisciplinary approach is necessary. The complexity of designing can no longer be the task of one specialization. Designer teams must include different specialities, and in order to anticipate and design for sustainability and future change, consultants in strategy, foresight and innovation could be included. Further, embracing the learning potential of the design process is crucial in order to generate new experience and knowledge in addressing the complexity of the contemporary urban realm. The learning potential of the design process is further strengthened by the using of representation and participatory processes as a method for understanding and generating new knowledge. Further, the development of conceptual models as part of the methodology might help to define a project for all actors involved in the process. The models with their associated strategies also inhabit a design potential which is discussed in the following section.

In practice/
models and strategies

Models and strategies of the landscape urbanism methodology

How are the previously mentioned methododlogical approaches translated to form? A few voices have been raised, arguing that landscape urbanism fails to produce form. As previously mentioned, Andersson (2010) is one of them. Further, Mark Treib raises the question: *Must we always choose between process-oriented landscape design, which never seems to appear as tidy artefact, and the tidy design, which never seems to address process?* (Treib, 2007 p 47).

The following chapter studies how the design potential of landscape urbanism mainly lies in the possibility to integrate process and design in order to further flexibility. Some projects demonstrate how process and form can be simultaneously addresses and affect each other, such as the Vista project, Drawn from the Clay. This is illustrated by the presentation of some conceptual models which are recurring in landscape urbanism writings and projects. Associated to these models, strategies are presented. These strategies show some of the design potential of landscape urbanism. The models and strategies are related to the landscape medium, how the model is interpreting the landscape metaphorically and operationally, in a matrix.

The presented models are derived from the prior chapter Defining Ideas of landscape urbanism; landscape as surface and field and landscape as ecosystem. Additional readings, project analysis and memo-keeping encouraged the distinguishing of a few main recurring themes regarding conceptual models and strategies of landscape urbanism. The following conceptual models were derived from the chapters Landscape as ecosystem and Landscape as surface and field (see Discussion: Landscape as surface and field and Landscape as ecosystem, p.120).

Landscape as surface and field:
Layering
Framework
Surface/Inverted cityscape
Program

Landscape as ecosystem:
Process
Resilience-/Anticipation
Shifting scales

Conceptual models in this sense mean basic working models that help to explain an approach or a concept. Hence, they have a potential to act as a tool in the design process. The models relate to the methodological approaches discussed in the previous section. The model of Process is for example related to the Designing strategies as opposed to form described above. However, the models are more focused on the design potential rather than a general approach. The design potential of the models is explained by associated strategies. The strategies were mainly derived from the analysis of projects associated to the landscape urbanism discourse and were also derived from chapter three. The strategies explain how the conceptual models are transferred to practice and subsequent form. A strategy is in this sense is the transfer from model to form. The character of a strategy is pertinently described by Fernández per and Mozas (2010 p. 5): *In a project, the underlying strategies tend to be confused with the results; however, they are part of a different time and order. The time of the strategy is previous to the time of the design. It is a project action of primary order which initiates linked processes. […] Strategy is not a concept but a device-action to put a concept into practice*.

The strategies are illustrated by projects associated to the landscape urbanism discourse in order to make them understandable and reflect on what they could mean in practice. The strategies presented in this paper illustrate some possibilities to generate form in a landscape urbanistic context. Hence, this categorization could be seen as a work in progress. It could be seen as a document that is as fluid as landscape urbanism, meaning that strategies, models and projects could be added or taken away recurrently.

Some models and strategies are more elaborated on than others. Therefore some models are more thoroughly described than others. I do not intend to criticise each project from its functional, aesthetic and social aspects etc. Such an analysis has been left out in this paper due to time restrictions. The project examples rather aim at illustrating each strategy and some projects could possibly illustrate several strategies. A more thorough analysis of the projects presented would probably demonstrate a more nuanced image were some projects would be considered more formal and not addressing questions of process and environmentally awareness. However, I chose the most significant characteristic of a project to illustrate each strategy.

The matrix

The projects are further included in a matrix to contextualize the models and strategies further. This matrix is set up in order to relate the models, strategies and projects to how the landscape medium is interpreted metaphorically and operationally in each model. The matrixes as well as the texts on working methods, models and strategies complement each other in an attempt to give an overview of the main characteristics regarding models and strategies of landscape urbanism methodology. The models and strategies have a possibility to be combined; hence the matrix could be seen as a palette of landscape urbanism strategies. Each model should not be seen as an independent feature. Rather, the models influence each other, since no fix boundaries exist in the landscape urbanism methodology. For example, resilience and framework influence most projects of landscape urbanism.

The quality of the matrix is that it relates models and the strategies to how the landscape medium is metaphorically and operationally interpreted in each model. Hence, the matrix includes the perspectives presented in prior chapters of the paper and thus functions as a summarizing and contextualizing agent for the paper. It should not be seen as a complete overview of landscape urbanism strategies, rather it suggests a contextualization and a basis for a conceptual framework regarding landscape urbanism methodology.

Landscape medium describes what kind of landscape features or concepts that acts as an operational or metaphorical model for each conceptual model. The idea of the metaphorical and operational interpretation of landscape is further described in the chapter Landscape as methodology. The category In practice aims at illustrating how the concepts could be transferred into practice by giving examples of projects associated with landscape urbanism. In conclusion, the matrix relates the conceptual models, strategies and projects with chapter three. The structure of Chapter Three is as follows:

Ideologies of Landscape urbanism
Landscape as Methodology
Defining Ideas of Landscape Urbanism and their Methods
Landscape as field and surface
Landscape as ecosystem

Transferred to the matrix, the subchapter Landscape as methodology is in the matrix represented by Landscape medium (metaphorical or operational). The subchapter Defining ideas of landscape urbanism is in the matrix represented by Landscape as surface and field and Landscape as ecosystem,

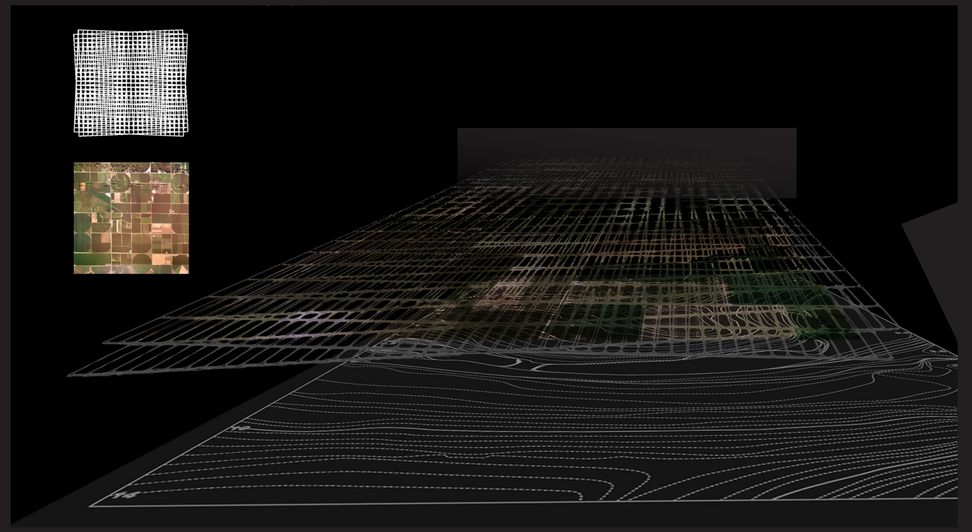
MODEL (defining ideas and their models)	IN PRACTICE (strategies and projects)	INTERPRETATION OF LANDSCAPE (operational and metaphorical)
LANDSCAPE AS SURFACE AND FIELD		
Framework	Patch: Patchwork metropolis Grid & Fields: Brikettfabrikk Witznitz Hybrid systems: Drawn from the Clay Formula/Diagram: Tree City, Downsview Park	Heterogenous field, natural systems e.g. hydrology, agriculture
Layering	Palimpsest: Duisburg Nord Superimposition: Brikett Fabrik Witnitz Multilayering: City Park Örestad Hybridization: Lifescape, Fresh Kills & Parc de la Vilette	Geological layering
Surface	Folding: Yokohama Ferry Terminal Inversion: Ville Nouvelle Melun-Sénart Infrastructure: Buffalo Bayou Promenade	Heterogenous field, surface of landscape,
Program	Juxtaposition: Parc de la Vilette (OMA) Non-programmed space/interaction: Ville Nouvelle Melun-Sénart & Jardin du Luxembourg & Charlotte Amundsens Square Spatial and temporal multiplicity: The Fresh Kills competition entries & The High Line	Agriculture, heterogenous field
LANDSCAPE AS ECOSYSTEM		
Process	Open-endedness vs closed systems: Bos park Succession: Riverside Park Phasing flexibility: Temporary public space-Berlin	Succession, crop rotation, dynamics, self-organizing systems
Resilience/Anticipation	Bigness-multilayered space: El Toro Marine Air Base As catalyst: Central Park & The High Line Interaction-information: Fresh Kills (Field Operations) & City Park Örestad A la Carte: North Lincoln Park	Adaptive ecosystems
Shifting Scales	Collison: Emergent ecologies, Downview Park Modifiability: Brikett Fabrik Witnitz	The scope of landscape

In practice/
models and strategies

with their models and concepts respectively. The subchapter Ideologies of landscape urbanism, is however more difficult to transfer to the matrix. One could claim that the Machinic mode is analogous to landscape as surface, and that landscape as ecosystem is analogous to the Field operations mode. However, landscape urbanism's character doesn't allow such strict generalizations, though it is evident that the Machinic mode is more influenced by the ideas of surface and infrastructure and Field operations to a larger extent is influenced by the ideas of landscape as ecosystem. There are many deviations though. For instance, Corner, one of the propagators of the Field operations mode, enhances the meaning of surface and horizontality in surface strategies where infrastructure acts as a catalyst and structuring element. Therefore, the subchapter Ideologies of landscape urbanism is not included in the matrix.

The conceptual models and strategies are organized in two sections according to the defining ideas of landscape urbanism; landscape as surface and landscape as ecosystem. These defining ideas will be briefly summarized as an introduction to each section. The different models will also be discussed in relation to prior chapters. This might be perceived as a repetition, but aims at motivate and contextualize the models and strategies. The framework model is related to both landscape as surface and field and to landscape as ecosystem as shown in the matrix. The associated strategies to framework are divided in Landscape as surface and Landscape as ecosystem as shown in matrix. In the text, framework with all its associated strategies will be discussed under the section landscape as surface and field.

In practice/
landscape as surface and field



Landscape as surface means to acknowledge the layering an structuring potential of landscape as well as to further hybrid effects, abstractly illustrated by Allen (1997) with the moiré.

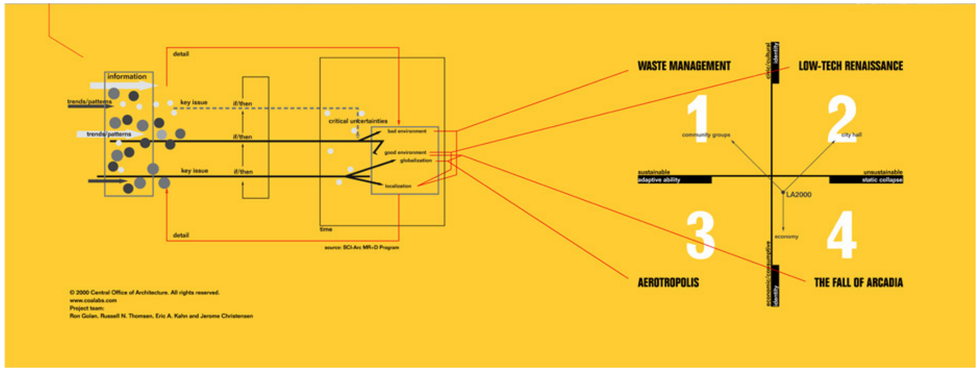
Landscape as surface and field/ framework

Landscape as surface and field

The idea of landscape as surface and field means seeing the landscape surface as active and operational rather than as a thin passive board. The surface of landscape is seen as a thick layered mat of processes. The surface of the landscape with its wide range of variety concerning materiality, program and organisation is seen as a valid model for contemporary urban conditions. Having the heterogeneous field as a model, also implies the ability of the landscape to include cultural and natural processes over time. Further, it means what I call the inverted landscape where the there is a shift of focus from letting landscape rather than buildings as structuring element when approaching the city. This also means a focus on the relations between the parts of the field and what effects might be generated rather than on static form. Hence, the designer can set up a framework in order to work on the processes of the field, to "orchestrate" them. Having the thick layered mat of landscape and the heterogeneous field as a defining idea means working with the following suggested models: Layering is used to organize the site by letting layers of history, ecology, and program be superimposed and hybridized. Framework is used to give instructions to a site and thus orchestrate the processes inherent at the site. Surface/inverted cityscape is used to structure the city through infrastructure and landscape features. Program is a way of composing by the use of effects rather than form.

Framework

As described in prior parts of the paper, designers are encouraged to promote the design of adaptable frameworks that can absorb change, rather than the design of a fix image within the landscape urbanism discourse. There is a focus on self-regulating system and the need for the designer to give up certain amount of control. Corjaoud (2000) means, similar to Allen (1997), that not everything should be controlled and built by the designer. Further, Berrizbeitia (2007) describes how landscape architects traditionally have approached a site with an aesthetic framework. The site, its physical appearance and character, has been viewed and assessed through the glasses of aesthetics. This produces a landscape architecture engaged in the visual and the present condition of a place, leaving history and future use out of the equation, proposing that landscapes are *little more than scenes frozen in time* (Berrizbeitia , 2007 p.176). She assumes that this traditional model of viewing a site and landscape design was challenged during the past quarter century when designs nowadays rather *focus on frameworks that adapt to changing conditions rather than forms composed to conform to an aesthetic whole* (Berrizbeitia, 2007 p.175). Competitions such as Downsview Park and Fresh Kills illustrates this ambition to design for future change and incorporate various natural, cultural, social and economical etc forces, as well as to incorporate future changes.



Designing a framework in form of future scenarios. Scenario city/ Los Angeles/IDEAoffice Architects/ 2000.

Further, the framework concept partly draws on ideas from current ecology. It has long been presumed that there is an intrinsic order of stability within natural systems and that biological diversity supports this system. Recent ideas of ecology question what stability means, since hardly any natural system isn't salvaged from disturbance and change. The idea of stability and balance is revised to include a more fluid idea of the living systems as a collage of changing steady states (Lister, 2007). This collage of changing steady states could be said to inspire the framework idea. Lister explains the revised idea of the steady state of living systems by elaborating on the forest: *in a forest, for example, there are different patches or stands, each of which is a different age. Each patch will grow to maturity, and then fire, windstorm, pest outbreak, or some other disturbance will cause the trees in the patch to die, and growth to start again. Which pieces are at which age changes with time. The patchwork mosaic is shifting constantly over the landscape, even though the landscape remains a forest* (Lister, 2007 p. 41).

This explains the idea of the framework, were one overarching idea or concept structures the framework over time but where individual deviations occur. Hence, the concept of the framework needs to be resilient enough, not to be pushed into a new identity, but not too fix in order to be adaptive. The framework cannot be totally transformed over time since it constitutes the fundamental identity of the site, its "script". Hence, there is a fine act of designing a framework which is not too open or too rigid. Allen mentions the outline of The Cordoba Mosque as an example of a built structure able to incorporate modifications without losing its identity due to the strong feature in the flexible modular outline of the building.

The interpretation of ecology and anticipation means that a framework shall be designed to be able to incorporate change and gain positive effects from it. The idea of the framework is also derived from the interpretation of the field and its organisation. An example of this is geometrical derivations from the field such as the patch or the grid. These are added as a horizontal layer to organise the city. Bach et al. (2005) suggest that these kinds of concepts can be implemented as both visual organizational models for a diffuse or fragmented area as well as a more abstract administrative model in order to structure and support future development in the area. Bach et al. (2005) further argues that the idea of introducing these kinds of organisational elements are not new to city planning and urban design. The grid could be seen as landscape strategy, used already in the renaissance garden as a structuring element. In this context, the grid was used not as a formal aspect but rather as an underlying structure which dissolved when filled out. This means a possibility for porous boundaries which allows the grid to adapt to future change. The grid doesn't function as a rigid, formal dictating structure, but is more of a non-hierarchical and self-referential nature (Allen, 1997). In this sense, the grid could be seen as one of several organizational systems aiming at arranging program and space.

The potential with this model is to set up a framework that allows for self-referential and non-hierarchical forces and processes without compromising the overall idea that gives the site character and identity. The design of framework is done after an extensive analysis of a site. This analysis is guiding in the design of a framework which is valid for the development of the site, I argue.

Strategies and projects: The framework constitutes a kind of a grammar, a nomenclature set up by the designer for a site. Hence, framework overarches the other models in a way, since it should be able to consider process, program and layering and at the same time be resilient, span across scales and anticipate change. The strategies below will be illustrated with projects. Some projects are mentioned in prior sections of the paper whereas some projects will be added to illustrate what the framework model could mean in practice.

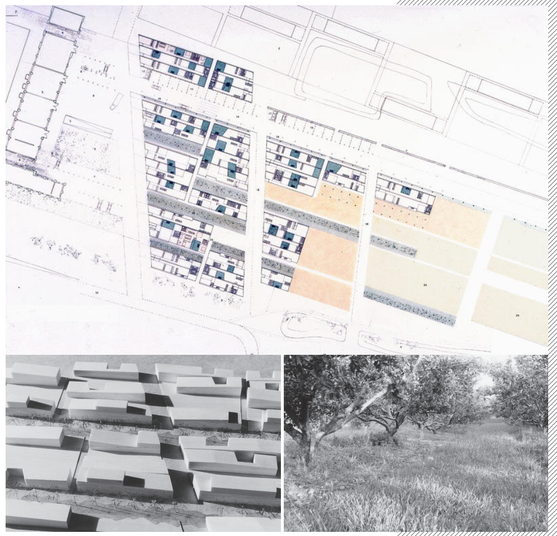
Patchwork metropolis/Neutelings

■ Strategy: *Patch*
Project: Patchwork metropolis/ Willem Jan Neutelings/ Randstad Holland/1989.
A framework strategy is the patch. Bach et al. (2005) mention the study project Patchwork Metropolis by the Dutch architect William Jan Neutelings as an example.

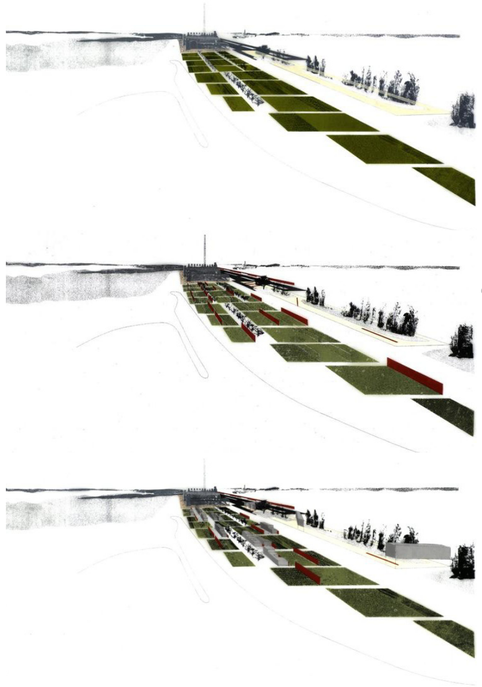
Neutelings studied the Dutch Randstad with the attempt to suggest the conditions of the Randstad as a possible model for urbanized territories.

In this model, the dichotomy of city and country is replaced in favor of a continuous landscape consisting of a series of cultivated patterns – a collage of urban and landscape fragmentation. The city is viewed as a coherent patchwork of different programs where the constellation of different programs represents the city's characteristics. Each fragment or patch is treated as individual units programmed without hierarchy. This means that traditional urban and landscape elements are equal. The collage of these equal fragments is the basis for how one experience the city. Diversity is the overall guiding policy as the fragments are transforming over time. Hence, the Patchwork framework constitutes a transformation model for a territory in constant development (Bach et al., 2005).

■ Strategy: *Grid and fields*
Project: Brikettfabrik Witznitz/Beigl and Christou/ Witznitz/1990s.
This project illustrates how the grid can be used as a framework aiming at anticipating future indeterminacy through phasing and superimposition. The future of the project was highly uncertain due to financial uncertainty. Hence, Beigl and Christou developed a framework based on the grid and field strategy that could transform over time (Bach, 2008). This is more thoroughly explained in the Layering chapter on page 158, as well as in the section Landscape as surface and field on page 89.



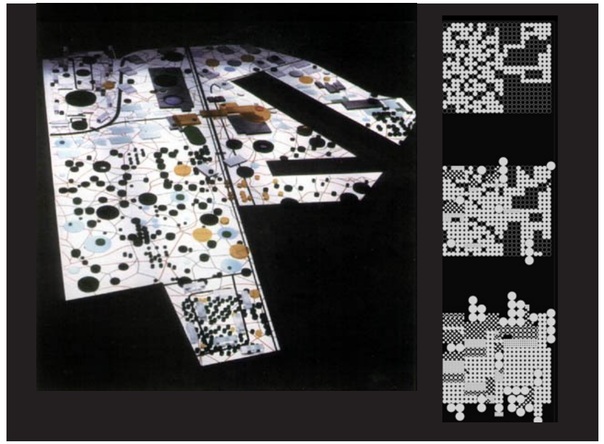
Brikettfabrik Witznitz/Beigl and Christou.



Brikettfabrik Witznitz/Beigl and Christou

■ Strategy: *Hybrid systems*
Project: Drawn from the clay/Vista/Holland/1990s.
Another example of a framework strategy is to work with the hybridisation of different systems. The designer instructs a site by designing certain conditions for the site. These conditions will generate certain effects on the site. However, the hybridisation of different systems means a potential for a large amount of self-regulation. One example is the Dutch project Drawn From The Clay of the office Vista, conducted in the 1990s. This project is more thoroughly explained in the section Methododlogical approaches on page 138.

■ Strategy: *Formula/Diagram*
Project: Tree City/competition entry for the Downsview Park competition by Bruce Mau/Toronto/2000
Another framework strategy is to set up a formula for a site as in Bruce Mau's competition entry for the Downsview Park. This project is more thoroughly described in the section Defining publications and competitions on page 49. From a framework strategy perspective, the entry of Mau illustrates how a strategy can be created in the form of a formula, combined by a distinct graphic concept. The strategy of the proposal was to grow the park through the formula:



Bruce Mau/Tree City.

Manufacture nature + 1000 pathways + Grow the park + Curate culture + Sacrifice and save + Destination and dispersal = low density metropolitan life (Koolhaas and Mau cited in Muir, 2010 p.117).

The strategy presented a formula and a diagram rather than a plan. This meant an openness and flexibility, since the formula and the circles could represent just about anything. However, it might mean that the framework was too loosely defined. The question of how to design a framework that is not too rigid or too loose will be elaborated on below. For more information on the Downsview Park competition, I refer to page 49.

Framework: Landscape medium-operational and metaphorical interpretation: The model of framework is derived from both the idea of landscape as surface and field and landscape as ecosystem. In the strategies like the patch and the grid, the form is directly derived from the organisation of landscape in monocultural fields or patches of settlements etc. This strategy allows for a possibility to regard each module as independent of the other or being able to merge as in the Witznitz project. The framework strategies further have a potential to span across different scales. This is largely due to their modular and thus flexible approach when it comes to bridging scales and their ability to modify over time. A grid is still a grid and a patchwork system is still a patchwork system no matter what scale. One could imagine a patchwork of different biotopes in a park were each patchwork is transforming according to season, ground water level and light-conditions etc. However, framework is also inspired from the interpretation of the ecosystem as self-regulating and hence adaptive to future change without losing its overall identity.

In conclusion, landscape as medium is interpreted both in a metaphorical and operational way in the Framework model. As a method of thinking, the framework is derived from the interpretation of the layout of the field and the self-regulating abilities of the ecosystem. The design of a framework aims at creating such self-regulating abilities. This enables the designer to organise the field, without pursuing too much control, as advocated by Allen (1997). The metaphorical landscape is thus interpreted as the field wherein different processes and systems occur. To give instructions to these forces through a framework demands an analysis of the existent forces on site and subsequently the envisioning of potential combinations and hybridisation of these forces. The operational interpretation of landscape within the Framework model could be done in two ways. On the one hand it can be interpreted as a formalistic strategy, such as the application of grid, patch, circles and line, derived from the organisation of the landscape surface.

On the other hand, the field can be interpreted in a more relational way, derived from an ecosystem were natural and cultural systems merge, as in the Vista project. This also implies two separate ways of approaching the site; as a tabula rasa were a formalistic strategy is superimposed as an organising layer on the site, such as the la Villette entry of OMA, or as a more grounded approach were the landscape features and functions on the site are considered, such as the Witznitz project. I advocate that the model works at its best when it is applied with consideration to the site. Then, there is a potential for natural, social and cultural systems to intertwine, which I suggest gives the site an own identity. An example of how different system can interact through a

design strategy is the development of the modular Agri-tech system in the High Line project. Through analysis different micro-ecologies of natural, social and cultural character along the High Line were established. These micro-ecologies were in turn enhanced by several different kinds of formal combinations enabled by the flexible modular system of the paving (Kvisthöj, 2008).

The strategies of the Framework have a potential to generate form, but mainly aims at organising other models such as programs and process. These models in turn have a potential to generate design. The model of framework aims at incorporating processes of a site by instructing the site through the design of a framework. In order for this to succeed, the framework needs to be sufficiently robust to provide for continuity but also be adaptable for future changes in order to be sustainable. Therein lays a challenge. A framework can not be of a too open-ended character as it risks losing identity. Of the strategies mentioned above, Patch, Grid and Fields all risk being quite vague. Applied as in the Brikettfabrik Witznitz though, there is a potential to use the strategy in order to anticipate change and establishing an identity of the site. Hybrid system has a potential to integrate natural and cultural systems in a framework and thus make it grounded at the site. This makes the framework motivated and less vague. Formula/Diagram risks losing its potential as a framework if the formula and the diagrammatic schematic approach are too undefined as in the Bruce Mau entry for the Downsview competition.

Layering

Layering enables the combination of different historic and programmatic aspects of a site without compromising them into an aesthetic whole. The different layers, for example a layer of historic pathways or a layer of program such as buildings, are treated as independent of each other. However, as superimposed entities they may traverse. Thus there is a synthesis potential within the layering model. Allen (1997) describes this potential by using the moiré as a metaphor. When two patterns, such as a grid, are overlaid at an angle, an additional moiré pattern is created. This could symbolize the hybridisation and synthesis effects of layering of different fields, as in the la Villette competition. This means that layering has different characters, such as the combination of cultural and social layers, as well as a more hands-on character, such as historical layers in the form of built structures such as factory ruins or railway tracks. Lister (2007) describes the abstract layers and their potential as follows: *…layered values–social, ethno-cultural, economic, political, religious, and ecological–collide, split, fuse and metamorphose* (Lister, 2007 p.52). Layering thus has several meanings; first to combine

The layered landscape. Illustration by Matthew Cusnick.

the historic layers of a site into a whole, second to compose the programs of a site by using a layered model, third to superimpose natural, cultural and social systems of a site by setting up a layered model. All of these different kinds of layering can be used as a model for a site or one specific kind of layering can be emphasised.

Layering proposes a non-hierarchical order of the surface of the site (Berrizbeitia, 2007). This method of creating and organizing a plan is not new. Berrizbeitia (2007) maintains that layering was implemented on many European parks of the late nineteenth century. She mentions Bois de Boulogne in Paris and Tiergarten in Berlin as examples. These parks were prior forests respectively royal hunting grounds. As they became incorporated as parks in the growing cities, old circulation patterns within the park were kept and a new road structure that connected the park with the surrounding areas was added. Hence, two different layers of circulation with two different scales and two different functions were conceived (Berrizbeitia, 2007). More recently, this strategy is evident in the OMA entry for Parc de la Villette and the competition entry of Corner and tllen for Downsview Park and Fresh Kills. However, Berrizbeitia (2007) states that there is a significant difference between OMA's and Corners strategies. Corner incorporates the site in the design; the topography, programs, ecological conditions etc. of the site dictate the layout of the plan. Further, the layers are designed to be dynamic in order to be able to change in size, form, vegetation and function as they face future indeterminacy. In the Downsview competition, Corner and Allen proposed several independent circulation patterns for humans (cultural systems) and wildlife (natural systems). In addition the vegetation of the site was connected with the surroundings through the establishment of a network of meadowways (Berrizbeitia, 2007).

Strategies and projects: The strategies presented below suggest how the Layering model can be interpreted in different strategies and subsequently be transferred to practical work. In addition to the projects mentioned in the text on layering above, a few more projects will be mentioned to illustrate what the different models of landscape urbanism could mean in practice.

■ Strategy: *Palimpsest*
Projects: Landschaftspark Duisburg-Nord/Peter Latz/Duisburg/1994.

Palimpsest is here referring to the term coined in the 1980s by the American architect Peter Eisenman. It represents an approach where the landscape is seen as a place of layered visible "inscriptions" from previous use. These inscriptions or traces from the past can be interpreted and read by people familiar with the history of the site or by a trained eye. This legibility is perceived as a quality since it conveys the many superimposed "voices", common histories and stories associated with the site. The traces thus create an understanding of the site, its origins and history. Most importantly, it provides the place with a unique identity and strong links with local qualities and characteristics (Kirkwood, 2001).

Duisburg Nord/Latz + Partner

The palimpsest idea is a recurrent concept in the revitalization of derelict post-industrial areas of the city. In this context, Landschaftspark Duisburg-Nord acts as an obvious model. Here, the palimpsest idea means to include an idea of legibility in the landscape, how prior uses and the history of the site can be made visible and included in the park design. Berrizbeitia (2007) describes how many features of the prior industrial use were kept as an underlying structure on the site as a palimpsest. New layers of programs and gardens were superimposed on the old structures: *While retaining the history of the site as image and palimpsest, and embracing the diversity afforded by the new administrative structure, Latz+Partner leave the connections between past and present unresolved* (Berrizbeitia, 2007 p.183).

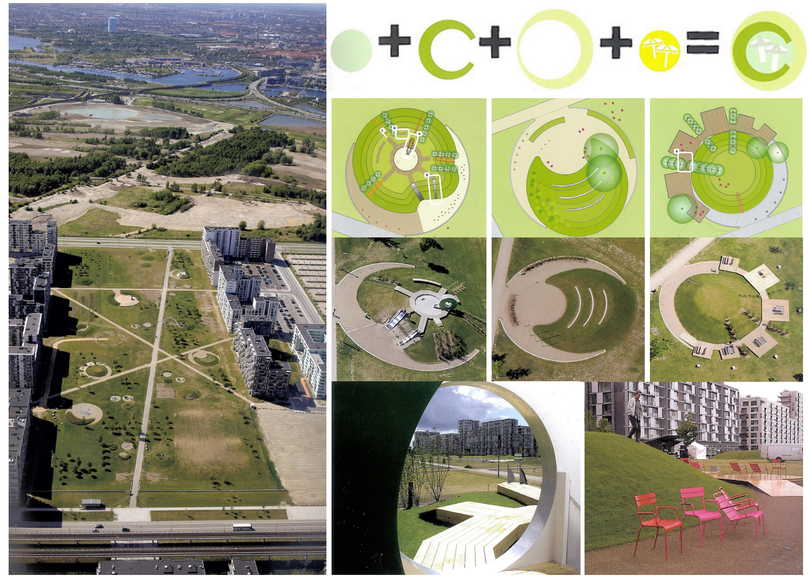
Hence, Berrizbeitia (2007) means that the non-hierarchical structure of the park and its layers, as well as a flat organisation of the administrative structure of multiple owners, enables the superimposing of past and present. This doesn't mean a reconstruction of the past, it rather supports the re-use of prior forms and structures into new uses (Berrizbeitia, 2007).

■ Strategy: *Superimposition*
Project: Brikettfabrik Witznitz/Beigel and Christou/Wit znitz/1995.

This project illustrates how the superimposition of layers can be a fruitful model in designing for a phased and uncertain development of a site. The site was located at former factory land. A grid framework, derived from contemporary conditions on the site, was used for the phased development of a residential area. The organisation of the site is structured in layers. These layers work together as a whole since the individual geometry of each layer is adapted to the geometry of the other layers. Thus, a flexible organisational layout is arranged that can work in a bigger context. Smaller fields were laid out as allotment gardens; the layout pattern was designed to enable future development of cabins on the plots. If there would be a need for larger housing complexes, several allotments could be combined into one. Fields within a grid structure were each given an initial program, such as sports-field or allotments. However, their program could subsequently be open to change. Several allotment fields could possibly be merged to one large field for commercial properties (Bach, 2008).

■ Strategy: *Multilayering*
Project: City Park/ Mutopia, Ghb, Moe & Brödsgaard/ Örestad/2008.

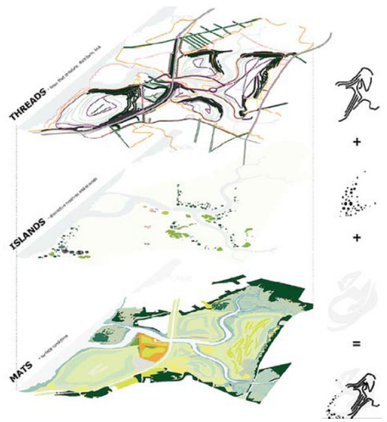
In Ørestad an interdisciplinary team composed a park by distributing the program in a layer-based matrix. The matrix is composed by different fields of activity. The matrix and the shape of as a circular shape were developed in close dialogue with stakeholders and residents in Ørestad. The potential of the layering model to include a social aspect was achieved. The different layers were given different typologies that could be combined. This creates various themed circular groups with different intensity and activities distributed across the green carpet of the park. These groups were named for example Zen Island, Family Island and Barbecue and Picnic Island. Further it attracts different users to the park and supports the social interaction between the various interest groups in one of the newest neighborhoods in Copenhagen (Fernández Per and Mozas, 2010). Including a participatory process means an additional layer to this strategy, hence it is called multi-layering.



The layered matrix used in the participatory process of designing City Park in Örestad/ Mutopia, Ghb, Moe & Brödsgaard.

■ Strategy: *Hybridization*
Project: Lifescape - Fresh Kills competition proposal/
Field Operations/2001.
Parc de la Villette competition entry/OMA/1982.
Hybridization means to merge different layers in order to reach synthesis effects. This could be done by both incorporating the layers of the site as well as treating the site as a tabula rasa.

The Field operations competition entry to the Fresh Kills competition illustrates how cultural layers and natural layers of the site could be layered and hybridized. The matrix proposed a process of re-colonization, where an organisational layer of threads (linear pathways and circulation), mats (surfaces and fields) and islands (clusters and groups) would guarantee access and framework of organic matter, people and programs. These layers and their interrelations were the backbone of the organisation of the park, distributing the programmatic elements: the linear threads organised the flow of matter, including water that enables derelict and ecologically poor areas of the site to be rejuvenated. The groupings of the islands allowed for protected habitats, seed sources and program activities. The surface mats constituted a patchwork of porous surfaces that cover the ground providing erosion control and native habitat. The different elements of the matrix, the threads,

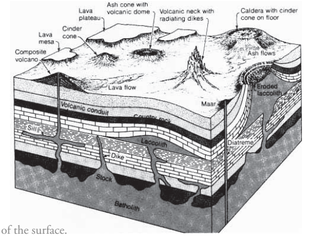


Lifescape/James Corner Field Operations.

mats, islands and surfaces, would in time hybridize and develop to a self-sustaining flexible system that would be able to absorb change and transform as demands were changed (Czerniak, 2007).

Another example of hybridization is the competition entry of OMA to the Parc de la Villette competition. As opposed to Corners Fresh Kills entry to Fresh Kills, the OMA entry does not incorporate the site in the layering to the same extent but rather treats it as a tabula rasa. The park was organised in five layers, which was enhanced in the representation material of OMA. Bach (2008) describes how the underlying layer consists of parallel strips of different programs, the second of the building program, the third with smaller buildings like kiosks and toilets, the fourth consists infrastructure and the fifth vegetation. The ambition of the la Villette entry of OMA was to superimpose these layers in order to create as many meetings between programmatically and activity-based space as possible, thus generating potential for hybridization. The underlying layer of strips is flexible; strips can be added, taken away or merged depending on changing demands over time. The boundaries of the strips are temporary, and reflect the context of the site and the need of its users. The other layers of infrastructure and buildings are not heavily programmed which supports the idea of flexibility (Bach 2008).

Layering:Landscape medium-operational and metaphorical interpretation: In layering, landscape is interpreted as a thick layered board. I suggest, the geological layering, the history of landscape acts as a model. Marot (1999) introduces the idea Three-dimensional sequencing and proposes: *rather than reading an open space as an emptiness defined by a series of surfaces and by light, in-depth vision sees the open space as a habitat in which the sky and what is underground engage in multiple relationships defined by the nature of each of them. This is a rich and complex vision, at once aesthetic and ecological, and it involves a project (even if minimally) with all the layers that compose the landscape: earthwork, topography, soil, drainage, utilities, planting, furnishing and so on* (Marot, 1999 p.51).



The layered crust of the surface.

Landscape as surface and field/ layering

As mentioned on page 44 Spirn describes the subject of layering by arguing for deep structure and deep context. The deep structure of Spirn constitutes the deep structure of the crust of the earth, meaning geologic, hydrologic and bioclimatic processes forming the landscape in an operational perspective. Deep context inform how these processes interact with culture through time to shape a site and generate its characteristics (Muir, 2010). This is similar to the hybridization strategy where natural and cultural layers are intertwined.

Marot (1999) emphasises that the representation of a project needs to demonstrate the different layers of a project, since a plan view excludes the quality of the three dimensional landscape. This is evident in some of the competition entries above where the layering was shown by using layered axonometric diagrams.

In conclusion, landscape as medium is interpreted both in a metaphorical and operational way in the layering model. As a method of thinking, the layering of the landscape crust acts as a metaphorical model. This enables an understanding of the different processes and programs that are taking place and thus helps to diversify and contextualize the understanding of a site and its history. As a method of acting, the operational potential means to organize a site, its processes and programs through the method of layering. This requires an operational understanding of the landscape, meaning an ability to decipher the processes that have taken place at a site, the processes that are taking place at a site in order to organize the different processes in a layered matrix, such as in Corners competition entry to Fresh Kills. Knowing the different processes enables a possibility to design strategies that can hybridize the strategies. The strategies mentioned above have a potential to generate form, however they mainly aim at generating effects. Another operational aspect is representation, as described by Marot (1999).

Layering helps to structure the different components of a site. This model might not be new. However, landscape urbanism suggests the holistic layering of different systems, natural, social and cultural as well as historical. The strategy Palimpsest mainly addresses the historical and social aspects. The historical layers of a site are guiding for the proposal, hence the historic layers will affect the program and social use of the site. As a consequence, the users could possibly sense the history of a site, which constitute a potential for social sustainability. The strategy Superimposition demonstrates how layering as a strategy can be used to address future uncertainty by letting a layered organisation modify according to future demands. Mainly an economical and social aspect is addressed in this model. Multilayering illustrates how a social aspect can be approach by using a layered model as a point of departure for a design-process. The model structures the participatory process and makes it tangible for all involved. This could in turn address an economical aspect, since the design proposal is conceived in dialogue with the users. Hybridization means to combine different systems in a layered model in order to generate hybrid effects. This could produce ecological as well as programmatical effects as illustrated by the projects mentioned above.

Illustration by Matthew Cusick.

Surface

Landscape is considered as an active performative field within the landscape urbanism discourse, as more thoroughly described in the chapter Landscape as surface and field. There is a focus on horizontality and fields rather than on solid objects. The relation between the different processes operating on the field and the possibility of the field to anticipate change is advocated by Allen (1997) and Wall (1999) among others. The field includes buildings, roads, infrastructure, green structures, open spaces, natural habitats, water and so forth all interrelating and affecting each other. The landscape operates as a model in the form of thick carpet of processes. Wall (1999) mentions thickening to describe this phenomenon. Corner addresses horizontality by describing three surface strategies, demarcation, infrastructure and adaption as described by Bach (2008). Corner (2006) also refers to landscape as a structuring element.

The operational aspect of interpreting landscape as a thick board of processes includes having the landscape as a structuring medium, as in Olmsteds Boston Back fens or the Melun Senárt project of OMA. This idea, when the landscape rather than the buildings structure the city, proposes a kind of inverted cityscape, as explained by Waldheim's (2006) idea of landscape as the lens through which the contemporary city can be approached. This further implies a focus on the region's infrastructure and its ability to act as a catalyst and structural guidance for future development.

In addition to the green qualities of landscape, infrastructure is also seen as a structuring agent. The combination of infrastructure and a green corridor is currently mentioned in the discourse. Wall (1999) construes that the traditional sites for collective life in the cities, such as the square or the park, have been replaced by spaces of mobility, like the freeway. New infrastructural projects, such as the Ronda de Dalt in Barcelona, show how infrastructural corridors become significance as ecological and social corridors, collecting, distributing and connecting users and functions (Wall, 1999).

Surface also means a focus on continuous horizontal surfaces, where the buildings and landscape physically come together, twists and turns. Wall (1999) mentions this as folding. This is considered useful in view of the opposition between landscape and building. Bart Loosma labels this biomorphic intelligence, where projects find structure in the ground and translate it into form, as the Yokohama Ferry Terminal (Gray, 2006). This is akin to the Machinic approach were built element are derived from landscape processes that are used as a point of departure for conceving form through the development of form generating computer simulations.

Strategies and projects: The model of Surface influences the other models as one of the fundamental ideas of landscape urbanism is the shift from object to field Allen (1997). The strategies and associated projects described below will illustrate Surface in particular. Some projects are mentioned in prior sections of the paper whereas some projects will be to illustrate what the Surface model could mean in practice.

■ Strategy: *Folding*
Project: Yokohama ferry terminal/Foreign office architects/ Yokohama/1994.
The terminal building was treated as a landscaped surface both inside and outside of the building. Hence, the building became a kind of hybrid and had the function as an extension of the surrounding surface and an associated park (http://www.archidose.org/Jul02/070802.html, accessed on 27th January 2011). The example from the Yokohama terminal mentioned above could be complemented by projects of the Architectural Association, having a more machinic approach to landscape.

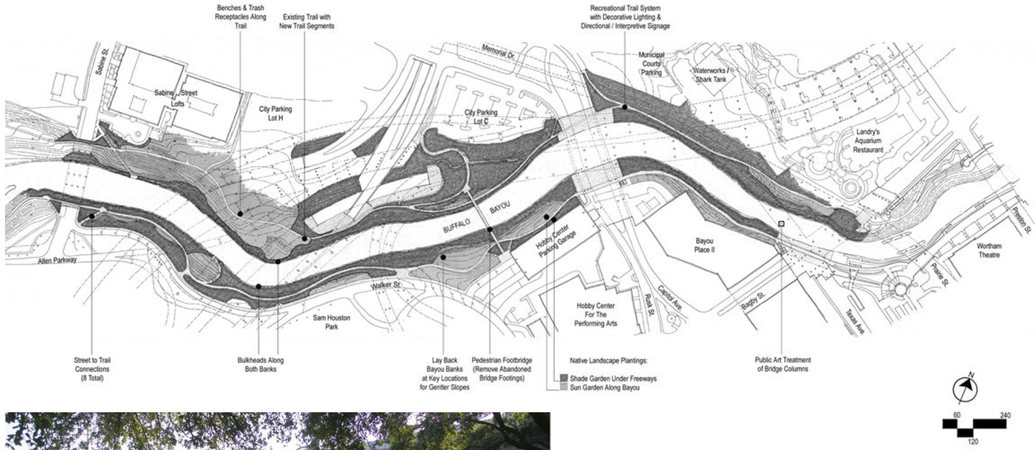
Melun Senárt/OMA.

■ Strategy: *Inversion*
Project: Ville Melun Senárt/OMA/Melun-Sénart/1987
This strategy means having an inverted image of the structuring elements of the city. Rather than buildings and solid objects, the landscape is structuring the city. An example of this is Koolhas and OMA's project for a "new town" in Melun-Senárt (Koolhas, 1995). Instead of concentrating on the disposition of the buildings, the architects sketched out a variety of programmed voids (gaps between buildings), whose location and design was derived from a careful analysis of site characteristics, habitat, history, existing infrastructure corridors and new programs. Around these shape of green, the built elements were organised. These were more in the shape of islands, meant to develop as individual independent enclaves. In this way, the structuring and element was shifted from the building blocks to the open landscape. In the project, the landscape is the guarantor for beauty, privacy, accessibility and identity, in spite of the buildings. Having the landscape as a structuring element also includes the question of development over time, since the strips of green were to be established and secured prior to settlement, which then subsequently established in several stages depending on community need and economy. Hence, they created a landscape structure in which islands of future settlements are isolated. These islands were seen as resilient to the unstable political, economic and cultural forces that govern the built environment (Bach et al., 2005).

■ Strategy: *Infrastructure*
Project: Buffalo Bayou Promenade/SWA Group/
Houston/2009:

The combination of infrastructure and a green corridor is often mentioned in the landscape urbanism discourse. An example of this is a project in Houston. The sprawling city was linked together through new bike and walking paths along the riverside. This also enabled the activation of vast left over land under highway bridges and the creation of an ecological corridor (Fernández Per et al., 2010). In addition, projects that regard water as a structuring element has been left out in this paper due to time restrictions. However, project examples from Michel Desvigne among others illustrate this strategy when water is the point of departure for a design. I refer to the book Intermediate Natures: The Landscapes of Michel Desvigne by Elizabeth Kugler (2008). Another example is the High Line project in New York where a derelict infrastructural structure was revitalized as a park and as an active part of the urban surface.

Buffalo Bayou Promenade/SWA Group.



Buffalo Bayou Promenade/SWA Group.

Landscape as surface and field/ program

Surface/Landscape medium-metaphorical and operational interpretation: The model of Surface interprets the landscape both in a metaphorical and operational way. As a method of thinking Surface is derived from the interpretation of landscape as a surface and field. The thick surface of landscape means an abundance of processes. These processes and relations between them is seen as a valid model for how the contemporary city and all its processes functions. This metaphorical model is translated to operational strategies that all are derived from the idea of the landscape surface as performative. These strategies have a potential to generate form, mainly is the folding strategy, but rather focuses on the organisation of the surface as in the inversion and infrastructure strategy.

The Surface model aims at presenting strategies to organise the city. This organisation shouldn't be too defined and rigid, but rather enhance interrelations of the parts of the field. This will in turn allow for anticipation as described by Inversion and the Melun-Senárt- project. I argue, that letting the landscape and infrastructure organize the built element might further sustainability. But, if it can anticipate future change as suggested in the Melun Senárt project remains a bit unclear. In this situation where landscape and infrastructure structure the buildings, the dissolving of dichotomies is not fully achieved. The separation of landscape and building still remains to a certain extent. The situation is only inverted as landscape and buildings are still in opposition. Folding aims at dissolving the dichotomies by letting surface and building merge. This strategy is thus more of a curiosity and a symbolic character than a strategy with a larger potential, I maintain. Letting Infrastructure have an organising role might further sustainability, if ecological corridors and social qualities are enhanced. However, a conflict of interest might be at risk. The accessibility of cars risks to be put in priority rather than the accessibility of humans, flora and fauna. Infrastructure includes both transport and recreation as described by Wall (1999). This is analogous to landscape urbanisms ambition to merge binaries, in this case nature and culture.

Program

Having program as a model implies a focus on working with programs when designing rather than using traditional urban typologies like park, square, district and garden (Wall, 1999). Wall means that infrastructure, net work flows and indefinite space are more valid terms. Within landscape urbanism, working with program means to develop possibilities for changes to be incorporated and hybridized at the site. This in turn acts as a catalyst for further process and effects, as discussed by Allen (1997). The strips of la Villette and the fields of Brikettfabriek Witznitz demonstrate how a graphic organisational pattern can be used as a framework for programs. They allow for future modifications and hybridizations of programs without risking that the identity of the framework, the strips and the grids, are lost. Further, unprogrammed space is enhanced as a strategy to achieve a flexible solution (Wall, 1999).

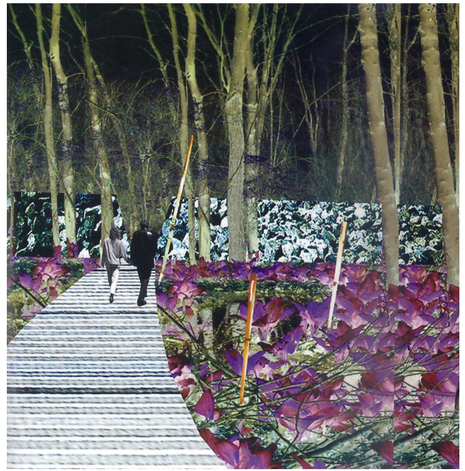
The role of program has changed in landscape architecture during the last three decades (Berrizbeitia (2007): *To compose today means to create programs. We invent them; we mix them, give them support, denaturalize them...programs are mutable, transformable in time. We must define programs which can forget or be transformed later* (Federico Soriano cited in Berrizbeitia, 2007 p.189). Berrizbeitia (2007) means that the materiality and physical aspects of a site propose how the layering of different forms of organisation, and if the open or closed dynamic systems of a site shall be executed. In addition, program is a strategy that can generate the different forms of organisation and the form of the open and closed dynamic systems. Berrizbeitia talks about how large parks *become meaningful places as much by their physical qualities as by the events that take place within them* (Berrizbeitia, 2007 p.189). Berrizbeitia is not primarily addressing open unprogrammed space as in open grass fields, but more on how program and events impact a site on different levels, materially, historically and culturally.

Berrizbeitia (2007) mentions the Fresh Kills competition entry of Mathur/da Cunha+Tom Leander Studio as an example of how events and program can generate a park. The programs of the proposal were seen as space generators and as elements that would contribute to the meaning of the park with its geologic and cultural heritage. The programs were set out to cover different scales, spatially and temporally. These programs and events were for example thematic walks on the site, a cicada watch, art, technology and science events, concerts, fireworks and a yearly marathon. These different events emphasized both the uniqueness of the site, as well as they aimed at drawing visitors from the region to the park. Some were short-term events, other long-term or even permanent. In the Corner/Filed Operations proposal for Fresh Kills, landscape and its processes and features are in themselves program and event. Corner accomplishes this by juxtaposing different natural types and thus challenging our expectations. For example some old basins of the old landfill, prior saltwater wetlands, was turned into a freshwater magnolia swamp. This was situated next to some remaining salt water wetlands which created a contrast effect. This contrast plays with our expectations, evoking a *surreal quality,* according to Berrizbeitia (2007, p. 195).

Hargreaves (2007) means that program is neglected as an important design aspect within landscape architecture. He

means that it is often treated in an obligatory manner by the faculties, leaving the students disoriented and uninspired. In practice, he means that program resembles *a menu that practitioners use to appease a public dominated by special interests and 'me-first' mentality, as well as disguise a lack of purpose, leadership and vision. Their plans often have the look of a seven-course meal purchased from a cafeteria* (Hargreaves, 2007 p.169). This criticism is followed by an appeal to landscape architects to explore the role of program, and the perception of humans, flexibility and unforeseen events, and furthermore how program relates to place (Hargreaves, 2007).

Strategies and projects: Composing programs means to leave some programs unprogrammed, to superimpose programs and to let programs collide. Examples of this will be given in the strategies below. The strategies presented below suggest how the Layering model can be interpreted in different strategies and subsequently be transferred to practical work. In addition to the projects mentioned in the text on program above, a few more projects will be mentioned to illustrate what the different models of landscape urbanism could mean in practice



Corner/Field Operations proposal for Fresh Kills, magnolia swamp.

■ Strategy: *Juxtaposition*
Projects: Parc de la Villette competition entry/OMA/1982.
Juxtaposition means to compose for programs to collide. The competition entry of OMA to the Parc de la Villette competition illustrates this. The structuring layer of the park was divided into strips. Each strip was given its individual programs. Each strip was intended to give rise to a variety of programs and a possible hybrid effect when the various programs interact. The strips can be programmed as isolated parks independently from each other which hold a potential for flexibility, since each strip can be approached and mutated independently from each other. The strips can also be reorganized and merged according to changes in demand, but without compromising the overall architectural idea. The intentions of letting programs collide are to generate new hybrid activities, new spatial characteristics, and further to enhance the qualities of each program by contrasting them with each other. By superimposing, and juxtaposing programs, edge zones are established were the exchange between different programs can take place (Bach et al., 2005)

■ Strategy: *Non-programmed space*
Projects: Ville Nouvelle Melun-Sénart /OMA/ Melun-Sénart/1987.
Jardin du Luxembourg/Paris/17th-19th century.
Charlotte Amundsens Square/1:1 Landskab & morgen arkitekter/Copenhagen/2008.
This strategy means not to freeze a set of programs at a site by setting up an overly defined set of programs. It further means a focus on undetermined space when some areas are left unprogrammed. Bach et al. (2005) mean that these kinds of urban voids don't necessarily have to be vacant lots, devoid of physical form. They are rather places with a programmatically ambiguous character. The OMA project Ville Nouvelle Melun-Sénart, mentioned in the section Landscape as surface and field, exemplifies this. The organising green strips at the site act as domains described by the absence of architecture. The concept for the structure, development and identity of Melun Sénart is established in the unprogrammed open landscape (Bach et al., 2005).

As Wall (1999) assumes, working with programs mean a possibility to design for the generation of certain effects rather than focusing on shape and form. Non-programmed space means to leave a site or a certain area of a site unprogrammed and thus open for flexible use. This includes interaction by letting users of a site define service and furnishing.

Instead of setting up elements with one function, a design that can be adopted and rearticulated by the users of a place is both economical and enriching as social space (Wall, 1999). The non-programmed use will in turn ensure a long and affectionate occupation of public space according to Wall (1999). Examples of this are the mobile chairs in Jardin du Luxembourg in Paris. The chairs can be moved and combined by the users of the park. This is a concept that has been successful through decades, since it allows the users to have an individual approach as they could be flexible in the way they "design" their visit in the park by being able to choose where to sit.

Another example of how the visitors of a site can interact is a recent project in Copenhagen. A passage was converted into a sports park and the ambition was to encourage the relationships between different types of users. The main ingredient of the park was multi-functional furniture, called the Cliff. Different types of sport fields, some undetermined, further aimed at attracting different users to the site and unforeseen events to take place. The flexibility of the furniture and the undefined activity areas aimed at contributing to a long-term adaptability of the site (Fernández Per and Mozas, 2010).

■ Strategy: *Spatial and temporal multiplicity*
Projects: The Fresh Kills competition entries of/Mathur/da Cunha+Tom Leander Studio/Field Operations/New York/2001.
The High Line/Field Operations/New York/2004.

This strategy means a possibility to activate a site and further its identity by planning for a wide range of programs and events over time. Involving the users of the site in different programs and events, further a long lasting and grounded identity of a site. The competition entry of Mathur/da Cunha+Tom Leander Studio illustrates how a multiplicity of program over space and time can generate a park. The programs were set out to cover different scales, spatially and temporally, which contributed to attracting a wide range of visitors to the site. There is a potential for synthesis effects and for unforeseen events to take place when a wide range of visitors, different programs and events interact (Berribeitia, 2007).

Another example of spatial and temporal multiplicity is to use natural processes as a main event and program. Program in this sense lies in observing the spatial and temporal dynamics of natural processes as described by Berrizbeitia (2007). This was done in the Corner/Field operations proposal for Fresh Kills. The competition entry illustrates how landscape, its processes and features, in themselves are program and event.

Charlotte Amundsens Square/
1:1 Landskab & morgen arkitekter

Landscape as surface and field/ program

In addition, the High Line project of Field Operations shows how different types of programs can be linked with time cycles where certain programs are short-term, such as parties, other recurring such as markets. These programs change according to season and contrasts to permanent programs of the site such as seating (Kvisthöj, 2008). This involves the park in a diurnal and annual rhythm, which further and defines its identity.

Program: Landscape medium-operational and metaphorical interpretation: The interpretation of landscape in the Program model means to see the surface of landscape as active and diverse. The landscape surface is composed by various programs such as areas for transport and agriculture. The organisation of surface and the interaction and hybridization of its parts, act as a model. The competition entry of OMA for the Parc de la Villette competition illustrates this. An agricultural model, the wide strips of monocultures, organises the programmatic strips of the park. The field is composed by varied sets of programs, agriculture, building blocks, recreational areas etc that change over time. This includes the understanding of how program is related to space and space to program. The competition entry for the la Villette competition by OMA enhances how the programmatic strips can be merged and reconfigured over time. This is also illustrated by the Brikettfabrik Witznitz project where a similar approach was deployed. The agricultural inspired strips of the OMA entry was represented by fields in the Beigel and Christou project in Witznitz.

Having landscape as a model also means an emphasis on indeterminacy. Landscape evolve but cannot fully be controlled. It is subject to spatial and temporal unpredictable change. Program thus correspond to this.

In conclusion, landscape as medium is interpreted both in a operational and metaphorical way within the model of Program and its strategies. As a method of thinking, the heterogeneous field acts as a metaphorical model. This helps to further the understanding of how programs are distributed, how they interact and change over time, jut like the landscape. According to Allen (1999) the field is about forces, not material. These forces could in this model be transformed to program. The program is thus used to understand and operate on the field. The field has endless possibilities when it comes to programs, events and their disposition. To compose with programs is akin to Allen's (1997) idea that the interrelations of the parts are more important than the single objects. In a programmatic sense, this has an operational potential where strategies aim at composing and juxtaposing programs or leaving them undetermined. The strategies have a potential to generate form but the strategies rather enhances the possibility to generate effects over time as described in the strategy Juxtaposition.

The model of Program aims at composing a site through the use of it, how the park functions rather than how it looks. This is seen as a way of anticipating future change, and thus designing for sustainability. Hence, programs should be flexible and adaptable. The strategy Juxtaposition addresses anticipation by letting associated programs hybridize according to future demands. Non-programmed space/interaction illustrates that a certain degree of unprogrammed space or interaction further social sustainability, and thus in the long term has a potential for economical sustainability. Spatial and temporal multiplicity illustrates how program can activate a place and the strategy thus addresses mainly social aspects, but also economical and ecological as the High Line project demonstrates.

Landscape as ecosystem/
processs

Landscape as ecosystem

This defining idea of landscape is derived from seeing the landscape as a series of processes, as an ecosystem. In addition to process, this includes the idea of anticipation and resilience in order to cope with future change. It further includes the idea of scale, since modern ecology regard ecosystems as dependable on local, regional and global forces. Landscape urbanism is to a large extent influenced by ecological design. Lister (2007) refers to Van der Ryn and Cowan who describe ecological design as the hinge between nature and culture. This enables new hybrid forms where human cultural solution and natural systems and processes are intertwined. Rather than treating human culture and nature as separate systems, the interaction between them offer hybridized forms which better correspond and describe the typologies inherent in the contemporary city. Lister (2007) mentions that these hybrid forms may be: *reclaimed brownfields that, once contaminated, now support heavy-metal-tolerant populations of grasses or recreated wetlands for storm water management and nature tourism; emerging Great Lakes ecosystems now dominated by introduced species, including salmon that were never expected to survive; or artificial prairie-savannahs, facilitated by urban deer that browse out undergrowth and maintain a tall and groomed tree canopy* (Lister, 2007 p.39).

This hybridization means that process, resilience and shifting scale spans across traditional dichotomies and scales. In practice this means including ecological, social and economical forces in the project.

Process

Process is of a central meaning within landscape urbanism as seen in the Field operations approach and in the section Designing strategies as opposed to form. Process means a possibility to design over time and space. It involves the incorporation of social, cultural and economical processes in a project as mentioned in the chapter Process in a landscape urbanism context on page 101. Further Kvisthöjs (2008) idea of the Life form illustrates a focus on process and the effects that the processes generate. Hence, there is a belief that the landscape is performative, since the Life form needs to maximize its effects through design, material and experience to succeed (Kvisthöj, 2008). A focus on process rather than form means a shift in methodology and how the concept of design is defined.

The landscape as living matter, as material evolving over time, illustrates how the landscape is changing and creating new forms and functions. *The capacity of landscape to make itself- its productive agency, nature making nature-is the broadest and oldest use of the process idea* (Berrizbeitia, 2007 p.177). Berrizbeitia (2007) means that landscape and process is thus a technique, a way of understanding and designing landscape. According to Berrizbeitia (2007) this includes the engaging of social, aesthetic and phenomenological effects. Process means dynamics of natural conditions as well as changes in social use because of transformations in demography, new trends in recreation, participatory processes and evolving of cultural diversities and subsequent diversification. Farsø refers to Corajoud and his idea of engagement in opening up the process to others. The process inhabits issues of both space and time and should be made as transparent as possible. The users should be included in the design process, and the designers should be able to explain their design. Farsø concludes *We [the designers] are to engage (in) the process* (Farsø p.5). However, the designer should still be the guarantor for the unity and consistency of the project (Farsø).

Berrizbeitia (2007) presumes that working with process within landscape architecture is nothing new. Landscape supplies various experiences. In the short term, it provides diverse experiences according to seasons. In the long term the decay and growth of landscape presents changing views and spatial conditions. Hence, she means time is the catalyst of change, the script-writer of the processes that the landscape is subject to. Berrizbeitia (2007) mentions the Bos Park in Amsterdam (constructed between 1929 and 1950), the work of Hargreaves Associates of the 1980s and the work of OMA/ Rem Koolhaas and West 8/Adrian Geuze as examples. She declares how these projects all demonstrate how working with process means the desertion of the pictorial ideal, the introduction of a subjective phenomenological approach to design as well as the use of program for directing a site. Berrizbeitia (2007) further declares that designs that incorporate process as a foundation for a project *those that leave the site open to contingency and change [...] also incorporate strategies that accentuate a place's enduring qualities* (Berrizbeitia, 2007 p.175). Hence, a process-driven practice not only enables a flexible design that is resilient for change, it should simultaneously articulate the uniqueness of a site and promote its long-lasting qualities.

Berrizbeitia (2007) discusses that in practice, it is a big challenge to decide which elements of the site that shall be open to process and which is to be treated as more permanent. An example of this can be seen in the Bos Park in Amsterdam. Two major elements constitute the park, the canal system and the forest. The water system is a closed system, where pumps regulate the water levels and the distribution of water. Hence, the water system is a closed system and fairly undynamic. The forest however, was planted with a

process-based practice where the planting granted succession, enabling an open-ended development. Two forest types were planted, one pioneer type of fast growing species and one of a more permanent forest of slow-growing trees. The pioneer forest helped the seedlings of the slow growing species to grow by providing them with shade. After fifteen years the pioneer forest, with a few exceptions, was cut down, allowing for the permanent forest to establish. A few individuals from the pioneer forest were kept as a horizontal branching layer to provide shade in order to prevent an overflow of ground-covering species. Hence, the park constituted a system of process and change, the forest, and a system of permanence and control, the water system. In addition to the water system, the constructed topography of a hill constitutes an object- like permanence and orientation in the flat landscape. Berrizbetia (2007) means that this example, as well as the competition entry of Corners team to the Fresh kills competition, demonstrates how projects incorporate process in a project, without compromising the design: *None of them [the projects], however, result in bland naturalistic landscapes. Process results in place when it is paired with additional conceptual frameworks, whether cultural, site-specific, or phenomenological that transforms it from mere technique to legible design language* (Berrizbetia, 2007 p.189). Additional contemporary projects focusing on process will be mentioned below.

Hargreaves (2007) asserts that the relation between permanence and natural processes can be difficult to tackle in the design of a site. He means that an un-designed-attitude towards a typology of a site, or an open-ended attitude towards it, such as the forest of the Bos Park, could be vital for a site. However, it should not be essential for the parks resilience and identity. An open-ended process that inhabit natural systems *in a meaningful way for the overall development of the park, such as storm water cleansing or forestation, is a great thing, but it is not the sine qua non*[4] (Hargreaves 2007, p.171) A lasses faire attitude toward a site is not the same thing as enhancing process according to Hargreaves (2007). Hargeraves (2007) further asserts that the notion of places is important to define the character and process of a site. I believe that design is an integral part in developing this kind of identity. By choosing what processes and typologies that will be ephemeral and which will be permanent, the designer contributes to the identity of the park. However, knowing the natural systems, the site condition, plants, ecology are important knowledge in this process. So are notions on spatial and temporal characteristics and how they affect the site and our senses.

4 *cause without which not* (http://www.highbeam.com/doc/1O33-sinequanon.html, accessed 15th February, 2011).

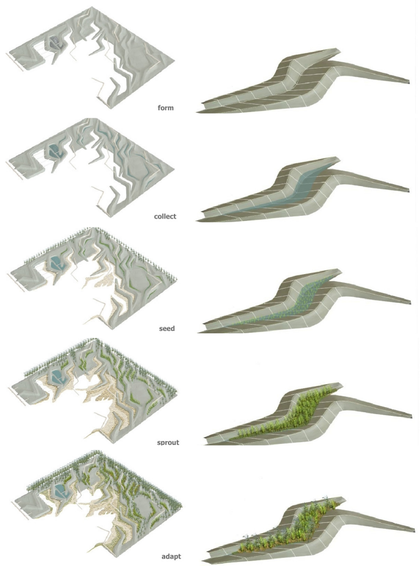
Strategies and projects: The strategies presented below suggest how the Process model can be interpreted in different strategies and subsequently be transferred to practical work.

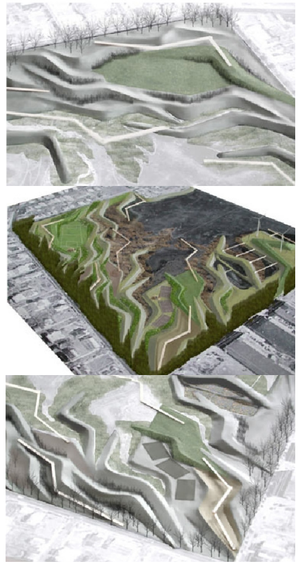
■ Strategy: *Open-ended vs. closed systems*
Project: Bos Park/Amsterdam/1929-1950.
As mentioned in the text above, the Bos Park demonstrates the contrasting of dynamic and closed systems. The park constitutes a system of process and change, the forest; and a system of permanence and control, the water system. Thus, the strategy is labelled open-ended vs. closed systems by the author. This strategy and Bos Park are more thoroughly mentioned in the text on process above. The strategy has a potential to generate dynamic situations within a site where different systems collide or overlap.

■ Strategy: *Succession*
Project: Riverside Park/ Massachusetts/STOSS LU/ 2004.
The winning entry of the competition to design a park in Massachusetts by Stoss Landscape urbanism demonstrates a succession strategy. The design of landforms favoured the collection of storm water from the site and associated neighbourhoods as well as the collection of seeds. The seeds were provided by planting of trees, shrubs and grasses in perimeter plantings (http://www.stoss.net/riverside.html, accessed 25th January, 2010).

Succession is more or less valid in most projects of landscape architecture that includes vegetation. Stoss however, had succession as a strategy as focus and as a point of departure for the overall design and function of the park. Similar to the concept of the Bos Park, two different systems are at interplay. But, rather than as in the Bos park where open-ended and closed systems are contrasting, the Riverside Park demonstrates how they interact. The dynamic natural succession of vegetation is dependent on the more stable cultural shaped landforms. In this way, the interaction of a dynamic system and cultural system is achieved. Succession in the sense of envisioning the future economical possibilities for the park, were proposed in the form of windmills in the park's outskirts. These were proposed in order to contribute to and guarantee the future management of the park.

Anticipation is also evident in how succession of the plantings influences the morphology and thus the use of the park. In this sense succession is interpreted in two ways; as a natural succession of vegetation and as social succession of how programs and use change over time. These two ways of succession interact since the succession of the vegetation produces effects over time which affects the flow of programme over time. In a few decades time, the programmatic spaces will change since seeds have grown and groves of trees will occupy the crevasses of the landforms. The windmills will in time generate economical





Riverside Park/ Massachusetts/STOSS LU.

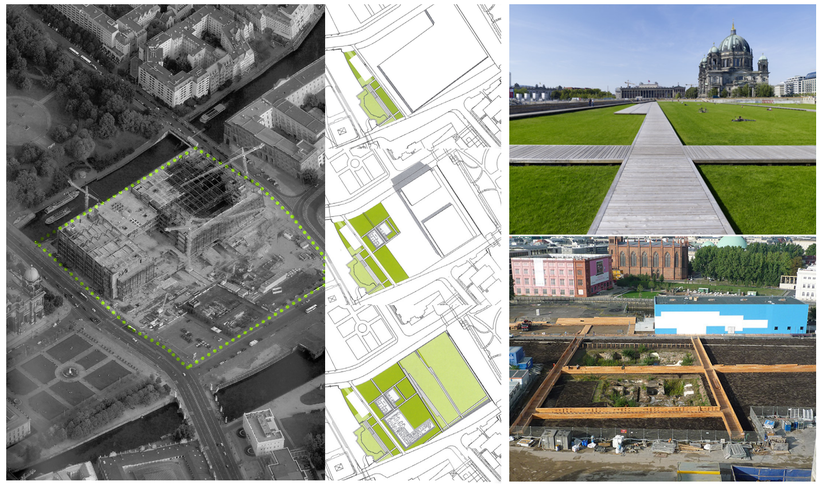
revenue which will enable management of the park. Hence, succession was used as a strategy with a potential to generate varied effects of natural, social and economical character over time. The natural succession of the site makes these different successions legible for the users of the park.

■ Strategy: *Phasing flexibility*
Project: Temporary public space/Berlin/ Relais/2009
This project demonstrates how process can be used as a model when approaching a site in transition by setting up a temporary design solution. It further illustrates how this transformation process can be made visible for the visitors of the park, thus involving the users of the park. It also demonstrates a flexible and cost effective design solution, which is appropriate for a phasing of a project with an indeterminate future.

When the former GDR Parliament building in Berlin was to be demolished, a competition was organized in order to generate ideas on how the surface could be used as a temporary public space before the new development was to be built. The Relais office proposed a cost effective proposal based on two elements, grass areas and wooden footbridge. The footbridges were arranged to further connection with the surrounding pedestrian road network. The simplicity and flexibility of the two elements enabled a phasing of the project development in three main phases. Further, the wooden boardwalks are elongated to cross the archaeological excavations carried out at the site (Fernández Per and Mozas, 2010). In this way, the concept of process is given an additional significance. It means that the process of archaeological excavation and the transformation of a site are enhanced and made legible for the users of the park.

Phasing is also a strategy in the competition entries for the Downsview Park and Fresh Kills competitions, as described in the Defining publications and competitions chapter. In these competitions, the phasing involved several systems of ecological, social and economical character and how these interact. The Relais project in Berlin rather demonstrates how landscape architecture can be used in order to occupy an urban void temporally. The flexible phasing of a flexible solution thus makes it possible to anticipate uncertainty.

Process: Landscape medium- operational and metaphorical interpretation: Process means invoking the interpretation and image of landscape as an ecosystem. The model Process and its strategies are mainly interpreting the landscape medium in terms of the dynamics of ecology and agriculture, such as succession. According to Lister (2007) this does not mean *a means to mimic, model, and even replicate nature's processes and functions* (Lister, 2007 p.39). Lister means that this imita-



Temporary Public Space/ Relais Landschaftsarchitekten.

tion of nature's processes can mean the excluding of human cultural elements. Therefore a fruitful combination of natural and ecological systems will be lost. Rather, the amalgamation of natural and cultural elements will allow for a more creative design practice (Lister, 2007). I see this as an attempt to free ecological design from the image of excluding any ambition of form and design. Regeneration and restoration of ecosystems could be a possible strategy of the Process model. However, in a landscape urbanistic context, this means to include both natural and cultural forces.

By identifying different processes on a site and by choosing which systems should be dynamic and closed, interplay of systems is made possible. Systems are put in contrast to each other as in the Bos Park or are encouraged to interact, as in the Riverside Park. All these interpretations of the landscape generate effects which are both visual and critical, since it produces a variety of spatial qualities as well as they signal the dynamics of nature.

The landscape is interpreted both in a metaphorical and operational way. As a method of thinking, ecosystem acts as a model. This model has a potential to further the understanding and contextualizing of processes and how they interact to produce dynamic situations over time. The instrumental or operational potential in having process as a model means to interpret ecosystems from an operational view. This means to transfer the abstract ideas of process and dynamics to form. Strategies like phasing, succession and contrasting different kinds of ecological systems and their dynamics help to fulfil a design potential. These strategies further mean a possibility to envision a site and its spatial qualities over time. Nevertheless, this requires an operational understanding of the landscape, an ability to analyse the processes that are taking place at the site and how they affect the site over time. This is linked to the metaphorical mode of thinking which incorporate an understanding of how processes also include the flow of program over time.

Time has always been a central part of landscape architecture. Landscape architecture is partly defined by the very aspect of time and the effects of time. Landscape architects have thus been trained to incorporate time in a project. However, landscape urbanism proposes an idea of process which not only includes the natural effects over time. Rather, a focus is to include and merge several systems and anticipate how they can overlap and evolve over time and what the possible effects might be. The strategies mentioned above aim at accomplishing this. The gain with these strategies is to address process in a creative way by letting it act as a generator for form.

Process further includes social, economical and ecological parameters which has a potential to generate sustainability.

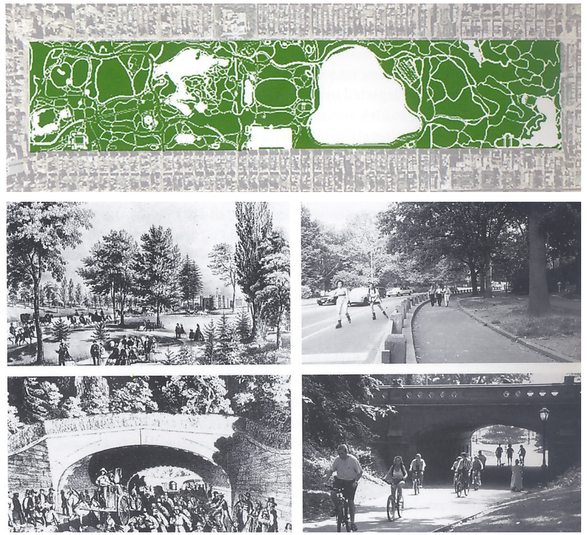
Landscape as ecosystem/ resilience/anticipation

The strategies address process in different ways. Open-ended vs. closed systems is mainly addressing ecological process. Form is generated by letting a dynamic and a closed system juxtapose and contrast. One could imagine varieties on this theme, such as letting an intensively managed area contrast against a more extensively managed area. The strategy succession addresses process in more ways than open-ended vs. closed systems. Ecological, social and economical processes are included in the succession strategy. The ecological succession of vegetation affects the programs and social aspects of a site. Further, economical anticipation to the site is included. At the Riverside Park this was accomplished through windmills. The strategy Phasing flexibility demonstrates how process can be used as a model when approaching a site in transition by setting up a temporary design solution. Hence, the strategy Phasing flexibility addresses mainly social and economical process. In Berlin, the social aspect meant to include the visitors of the park in the transformation process of the site. The economical aspect meant to design a flexible and cost efficient solution that could adapt to the indeterminate future of the site.

Resilience/Anticipation

Resilience and anticipation means to envision the project as an ecosystem that can foresee and recover from changes in the surroundings at a local and global scale. Projects should function as an ecosystem, able to recover from external change. Czerniak (2007) describes resilience as *the ability to recover from or adjust to change that may be perceived as 'good' or 'bad'* Czerniak, 2007 p.215). In an ecological sense, resilience of an ecosystem is demonstrated through its ability to resist disturbance before it is altered, e.g. from grasslands to shrub-desert (Czerniak, 2007). In the context of a park for example, this means that the design of the park is able to handle change; demographic change, change in demand, change in climate, change in the surroundings etc and still remain its identity and function as a park. Further, Czerniak (2007) means that a project that engage in participatory processes and engage in their feedback have a greater possibility to be resilient. Farsø (p.6) states: *Our designs are to take withstand disturbances and survive on feedback.*

As we have seen in previous chapters, the ability for a design to anticipate and incorporate future change is important within the landscape urbanism discourse. Allen (1997) mentions this in the description of the grid and other field phenomenon. Another example comes from the competition entry of Field Operation to the Fresh Kills competition. This entry illustrates the idea of resilience in the design of a park by the use of a matrix organising the site. In her description of the Life form, Kvisthöj (2008) emphasizes the idea of evolution and thus the idea of resilience and anticipation. The Life form is a model for the scope of architecture and the process of conceiving it. Each life form has its certain processes that generate certain effects. According to the ides of ecology, each life form strives at maximising its effects. To do this, the processes should be adaptable, being able to handle change in the environment by being flexible, but at the same time being as specified and robust as possible. Hence, flexibility is advocated in order to foresee future processes and their generated effects.



Central Park, resilient partly due to its circulation system according to Czerniak (2007).

As a designer this also implies the capacity to unravel coming events and disturbances on the site and what these might result in. By anticipating what will occur on the site, and what its future meaning will be, and by understanding what has happened on the site and what the prior meaning of the site has been, the designer can think strategic about the site and will be able to *recognise the main tendencies, the ones that offer most chances to conduct and support forthcoming modifications, the ones that allow interference with the real by consuming the least amount of energy* (Corjaoud cited in Farsø, p.3). Czerniak (2007) means that in order for a park to succeed the designer must be able to visualize and anticipate the future of the park within its context. She quotes Bruce Mau, one of the designer's for Downsview Park: *to imagine a park presumes an urban condition. When Frederick law Olmsted imagined central Park, he imagined*

the context it would eventually inspire and sustain (Mau cited in Czerniak, 2007 p.219). Czerniak (2007) means that all aspects need to be resilient; such as social, infrastructural and organisational factors. Resilience means the ability to *accommodate diverse and shifting social, cultural, technological, and political desires while maintaining its identity is a characteristic of its resilience* (Czerniak, 2007 p.216). Further, the interplay between static and dynamic elements of a site, *constancy and change, and predictability and unpredictability* defines a site and its resilience (Czerniak, 2007 p.216). The ability of a park to absorb and accommodate change without losing its identity, to evolve from these changes, is resilience.

Lister (2007) indicates that the majority of the parks in our contemporary cities are poorly designed to accommodate changes and indeterminacy. These parks are rather designed to maintain a certain stage, a permanent state supported by intensive management. The local ecosystems on the site, such as a swamp, are often ignored. Hence, the vision of the park and its maintained steady state is predominant, counteracting the natural processes on site. To enable this superiority over the natural systems inherent on site, these kinds of systems require support in form of economical and ecological means, making them less resilient and sustainable. In order to further the anticipation and resilience of a site, Lister (2007) suggests a diversity of vegetation and habitats. This means the incorporation of species tolerant and adaptive to cyclic fluctuations such as flooding, fire and wind. On the contrary these kinds of disturbances can be added to a site in order to maintain species unique for the region: *For example, in an ecosystem where localized flooding is a seasonal but not precisely predictable occurrence, park designs can accommodate several ephemeral habitats that appear and disappear based on fluctuating water levels, with minimal management intervention. Indeed, designers might readily embrace the challenges and opportunities posed by the paradox of dynamism: a dance between emphemerality and permanence* (Lister, 2007 p. 43).

However Lister (2007) means that large parks for example, may include conflicting ecosystems and programs. They may contain a variety of habitats that might compete. The need for fast-flowing streams in order for trout to survive will collide with the beaver's behaviour to dam up the stream. From a sustainable point of view, both states are valid, but not simultaneously. A sustainable approach means the consideration of both perspectives. Having a holistic long term procedural approach to a site is what Lister (2007) calls adaptive ecological design. *Adaptive ecological design is, by definition, sustainable design: long term survival demands adaptability, which is predicated on resilience.* (Lister, 2007 p.36). Adaptive ecological design also includes social, economic and cultural aspects. *Thus large parks must be designed for both ecological and programmatic complexity, for both biological and socio-cultural diversity, and, accordingly, for all facets of sustainability. Adaptive ecological design is a strategy that moves us towards this goal.* (Lister, 2007 p. 36).

Hargreaves (2007) states that it is important to enable for several different systems in a park, different characters, functions and ecological characteristics. Different matrices within a park further resilience, according to Hargreaves (2007). These differences could be more or less subtle I allege, and the systems could overlap, juxtapose or transits and hybridize. Hargreaves means that differences, and the emphasis on the different systems could constitute a quality: *I would go farther and state that a transition is not necessary between two or more sets of systems. Indeed, a juncture can often produce heightened diversity. Whether it be visual or biological.* (Hargreaves, 2007 p.150). This resembles the moiré (Allen, 1997).

Two systems might overlap and create hybrid effects. I would say that the contrast and juxtaposition between different systems enhance and help to define each system. The forest at the Bos Park would be less remarkable, if it wasn't for the contrast of the other system, the waterways and open grassy fields. Juxtaposing two different design strategies, two narratives, means a complexity that I believe further resilience, not only at the ecological level but also at the social level and creates variety and hence perceptual qualities.

There is a difference between adaptive and resilience. Czerniak (2007 p.230) describes how: *Whereas adaptation suggests continual change in form and identity to adjust a set of conditions (from field to meadow to forest), resilience implies a return to a recognizable state after disturbance*.

Strategies and projects: The model of resilience influence the other models as one of the foundational ambitions of landscape urbanism is to further sustainability and thus resilience. The strategies and associated projects below will illustrate resilience in particular. Some projects are mentioned in prior sections of the paper whereas some projects will be to illustrate what the Resilience model could mean in practice.

■ Strategy: *Bigness – multilayered space*
Project: El Toro Marine Air Base competition entry/
Hargreaves Associates/California/2005.

A large site has a larger potential to be diverse and flexible and combine different kinds of systems rather than a small scale site with limited amount of space to accomplish flexibility and ecological diversity. Hence, small scale projects risks at being more one-sided and reduced to simplicity. This produces a decorative function with a designed fix image, which is dependant on a steady state of a park's ecology. The bigness in itself is a possible generator for a more complex

layering. This in turn has a potential to further resilience. An example from Hargreaves associates illustrate this as described below. However, small scale projects can also be designed for resilience, even though the integration of a multiplicity of systems must be compromised. The example by 1:1 Landskab as described in the Program model (see p. 172) illustrates how a small space can be made flexible and resilience by the design of a flexible furniture and unprogrammed space.

Hargreaves (2007) describes a project where his office engaged in the question of designing flexible and resilient places where different systems occur within one site. A 1,100 acre park on the abandoned El Toro Marine Air Base in Orange County, California, was to be envisioned by an international competition in 2005. The air base is flat and all run off water is diverted away from the site. Hargreaves Associates aimed at developing a strategy in which a series of operations would change parts of the site into parkland while acknowledging some of the existent qualities inherent on site. The strategies included proposed stream corridors to bring hydrology back to the site, and the subsequent excavation soil would be dispersed in order to create landforms. Bringing back water to the site would enable for riparian corridors which would encourage biodiversity. The water was proposed to be stored in basins powered by solar-powered pumps where former runways used to be. Plant nurseries were proposed to supply the development of the parks vegetation. Other runways became parking lots linking to programs such as organized sports and other recreational activities. The hangars were proposed to be kept in order to house cultural institutions. The parklands, cultural institutions and public transportation were linked through a bridge. The native plant community of grasslands and oak trees is fragile. Hence, Hargreaves Associates proposed a strategy where patches within the meadows and oak trees would be irrigated. The size and placement of these patches would be decided depending on demand for activities over time (Hargreaves, 2007).

Hargreaves (2007) means that these kinds of strategies are of a flexible character because a large amount of the perimeters, programming, nature and cultural institutions were unknown. Hence, time had to be an integral part of the strategy. Time, and with it demand, would show in which direction the park would evolve. At the point of departure it was essential to design for flexibility and diversity. Nevertheless, some elements and forms of the park that could be explained by certain operations were established. These operations supported the aim of the proposal to *develop a strategy that could involve more nature, activities, and culture in later plans, either singularly or in various combinations* (Hargreaves, 2007 p.172). This strategy included systems of a more permanent and open-ended character to exist within one site, without giving in to a lasses fire attitude, but by designing form, surface and materials. *It is, however, a dynamic master plan with flexible trajectories over time*, according to Hargreaves (2007 p.172). What we see here is another example of a strategy in the form of a dynamic master plan of a vast area of land, also demonstrated in the Fresh Kills and Downsview competitions.

■ Strategy: *As catalyst*
Project: Central Park/Frederick Law Olmsted and Calvert Vaux/New York/1858.
The High Line/Field operations/New York/2004.

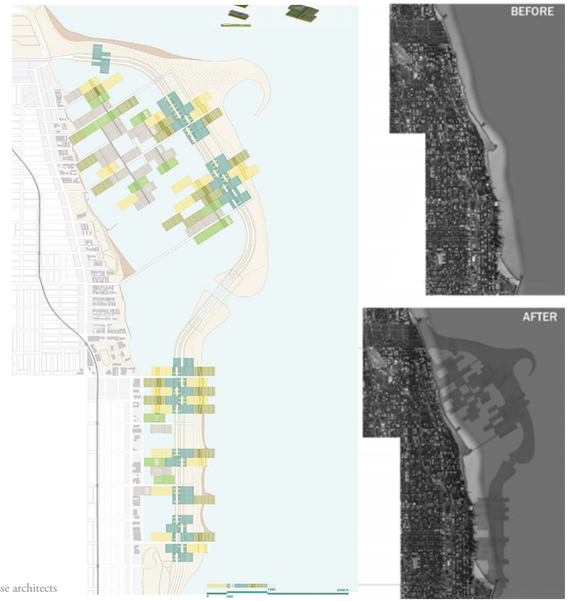
Czerniak (2007) means that Central Park has kept its resilience through 150 years, mainly because of the circulation system. *Olmsted's brilliant depression of the transverse roads and his separation of circulation paths in plan and section enable the park's resilience* (Czerniak, 2007 p.218). Disturbance in the form of changes in programming and development have transformed a large amount of the green spaces of the park. But, the key element of the park and a reason for its success and resilience lies in the ability to circulate seamlessly through the park, as a pedestrian, bicyclist, in a car or on a horse. This quality and fundamental structure has remained during the years (Czerniak, 2007). Additionally, I would allege that Central Park's role as a catalyst for urban development as mentioned by Corner (2006) and Czerniak (2007) contributes to the resilience. If it wasn't for the park's ability to generate monetary value as a catalyst, the circulation pattern, essential for the resilience of the park according to Czerniak (2007), might not have been kept during the 150 years of the park's existence. Thus, the role of the park as catalyst encourages its resilience. A recent project, the High Line in New York further demonstrates how the activation of a forgotten site can contribute to the regeneration of an area.

■ Strategy: *Interaction – information*
Project: Lifescape, Fresh Kills competition entry/ Field operations/New York/2001.
City Park/Mutopia, Ghb, Moe & Brödsgaard/ Örestad/2008.

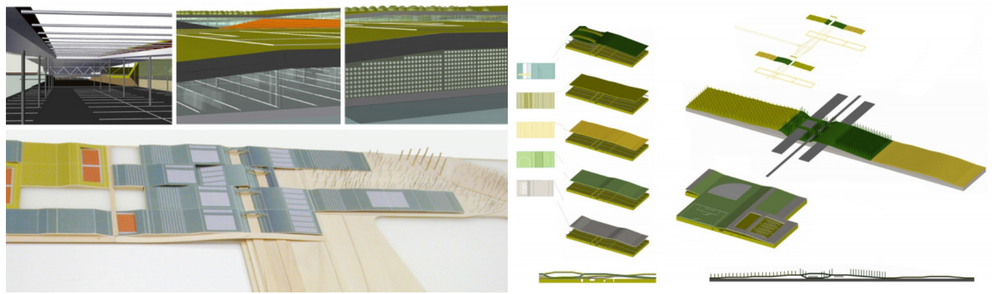
This strategy aims at creating resilience by securing the transformation of a site with the public. The information campaign of the Fresh kills project of Field operations as well as the participatory project in Örestad by Mutopia, illustrate this. This has a potential to further resilience since the participatory process has a potential to generate an idea of trends and possible change at the site. This notion can be incorporated in the design. Resilience also means to encourage the public understanding of the site. The exchanges of information between designers and participant will in turn help to communicate the proposal, which in turn will further the parks legibility. This encourages the resilience of the site, as advocated by Czerniak (2007).

■ Strategy: *A la carte*
Project: Assembled Ecologies: Infrastructure a la carte / Cecilia Benites, Clare Lyster and Oisse architects/ Chicago/2004

Another example of how resilience can be achieved is through the establishment of a modular framework that allows for both flexibility and legibility. The winning entry in the competition to design North Lincoln Park in Chicago, Assembled Ecologies: Infrastructure a la carte, was conceived by a team led by Clare Lyster. The proposal suggested a kind of organizational system composed of five different modules, based on the dimensions of neighborhoods in Chicago. The various modules have their respective typology such as mound, ditch, lawn, terrace and weave. The typologies were adequately defined by the design team in order to provide each typology a clear identity and legibility. At the same time it enabled the various stakeholders involved in the project to express their individuality on their module. The strong overall concept helped to promote flexibility and legibility for the park (Czerniak, 2007). The design team used the a la Carte strategy by developing different modules. These could be defined by the stakeholders to a certain extent, thus giving the stakeholders options to choose, as from an a la Carte menu.



Assembled Ecologies: Infrastructure a la Carte/ Cecilia Benites, Clare Lyster and Oisse architects



Assembled Ecologies: Infrastructure a la Carte/ Cecilia Benites, Clare Lyster and Oisse architects.

Resilience-anticipation: Landscape medium – operational and metaphorical interpretation: In conclusion, landscape as medium is interpreted both in a metaphorical and operational way in the Resilience model. As a method of thinking, resilience is derived from the interpretation of the landscape as an ever-ending series of interacting adaptive ecosystems. Hence, the project and its context are viewed as an ecosystem that should be designed in order to recover from changes. This is achieved through the development of operational strategies derived from the metaphorical interpretation of the adaptive ecosystem. The idea of the ecosystem in a Resilience context further mean the idea that components affect each other, that every individual aspect of a project is affected by local, regional and global forces. This inter-changeability is most evident in the interaction strategy where the exchange of information is highlighted as a means to further resilience.

The metaphorical interpretation of ecosystem further means an emphasis on anticipation. As an operational strategy this is vivid in all strategies Catalyst, a la Carte, Interaction and Bigness – multilayered space. These strategies aim at anticipate change in different ways, functional by envisioning the future of a site by designing a multilayered flexible strategy, economical by marketing the site as a catalyst that will regenerate an area, social by receiving information about the site from its users in order to make future scenarios. All the strategies have a potential to generate form. However, interaction and catalyst are used in the working method sense since they act as tools in the process of establishing and communicating a project in the public realm.

Within the landscape urbanism context, resilience means more than ecological resilience, social and economical aspects are also enhanced in order to further sustainability. Anticipation in all levels is also crucial in order to conceive a design that can adapt to future change without losing its identity. Flexibility is enhanced in all the strategies described above. However, there are limitations to how flexible a built project can be, as discussed by Bach in the Landscape as surface and field chapter (see p. 90). The strategies mentioned above aim at accomplishing flexibility as well as resilience at different levels. The gain of these strategies is to address resilience and anticipation in a creative ways. Bigness-multilayered space addresses resilience by providing diversity through a phased development. This diversity makes the site flexible and resilient since a variety of ecological and social needs can be accommodated over time. The strategy Catalyst mainly addresses resilience in a social and economical way. The example from Central Park shows how the recreational values, mainly because of the circulation pattern of the park, encouraged the development of future infrastructure and housing in the vicinity of the park. Thus, the strategy also includes an element of anticipation. The strategy A la Carte accomplishes resilience mainly by offering a flexible and modifiable design solution whose identity is formed by the designer and the stakeholders. Hence, resilience is addressed in a social and economical way, since it includes a participatory aspect which encourages a long term economical resilience since the stakeholders are allowed to affect the design to a certain extent. The long-term flexibility means anticipation. The strategy Interaction-information means to address resilience mainly in a social way. However, as with A la Carte, integrating social interaction in a project could possibly further its economical resilience in the long term.

Shifting scales

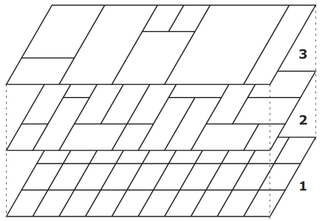
The idea of oscillating between different scales when forming the contemporary city is a recurring theme in landscape urbanism writings. The second theme in Corner's classification of landscape urbanism deals with the horizontal surface (Corner, 2006). This surface includes the entire range of scales in the urban field, from sidewalk to street, to its overall infrastructure. Commenting on prior projects of landscape architecture such as Boston's Emerald necklace Park system by Olmsted, Corner (2006) means that this projects shows potentials to shift scales *to locate urban fabrics in their regional and biotic contexts, and to design relationships between dynamic environmental processes and urban form*(Corner, 2006, p.24). This illustrates Corners suggestion of a method where the context and the conditions of a site are analysed through a regional lens with an ecological agend (Corner, 2006). Corner (2006) mentions the importance of working with a model switching between different scales in order to grasp the complexity of the contemporary city. I contend, shifting scales it is analogous with the emphasis on interdisciplinarity, the dissolving of the planning-design dichotomy, and other forms of hybridizations. In practice, shifting scales means to relate the project to different scales; to contextualize the project in the surroundings as well as to contrast different scales within the project. It is also about understanding the body's scale in relation to the surrounding environment.

Allen (1997) talks about setting up frameworks that span across the scales. He uses the conceptual models of mat, flocks, digital fields and swarms and grid to exemplify the idea of shifting across scales without losing the fundamental idea and identity of a project.

Farsø (p.4).refers to Corajoud and his idea of linking the different scales of a site, when landscape elements *should be associated and tied together. Like in Versailles, the trim of a hedge is to reference implicitly to the work of the overall garden.* This means that the design should oscillate between different scales. Berrizbeitia (2007) maintains that parks must address

its context by including shifts in scale *from the vast to the physically enclosed – to activate relations between the body and the landscape* (Berrizbeitia, 2007 p.195). This means to relate the park to its local, regional and global context and consider how these scales interact. Shifting scales further mean an awareness of the relationship between local and global processes. In a world largely influenced by the global market economy, actions made at the other side of the globe will most likely influence the local context. Berrizbeitia (2007 p. 195) states that place is *no longer simply local but formed by a tension between the immediate physical setting and an extended network of associations.*

Strategies and projects: The model of Shifting scales means an ability to relate a project to its local regional and global context. This highlights an awareness of how a site is integrated in a larger context and is at times the subject of forces operating beyond the scope of the site. Awareness of the global scale may imply general strategies aiming at further sustainability and a sense of solidarity with nature, such as community gardens. In a regional scale it can mean to encourage the linking of different scales through circulation. In the local scale it may imply a more tactile approach where the generation of certain effects and sensory experiences are highlighted. The



Brikettfabrik Witznitz/Beigel and Christou (left).
Emergent Ecologies/ James Corner and Stan Allen (right).

strategies and associated projects described below will illustrate shifting scales in order to elaborate on what the model Shifting scales might mean in forms of strategies in practice.

■ Strategy: *Modifiability*
Project: Brikettfabrik Witznitz/Beigel and Christou/ Witznitz/1990s.
Bach (2008) mentions Brikett Fabrik Witznitz as an example of how the grid can be used in order to be able to shift scales within a project. The grid is modifiable. Even if programs are changed or some fields of the grid are combined or extruded, the overall concept would still be the grid. Further, other framework strategies such as the patch or stripes could still be called a patch or stripe regardless of the scale, while remaining their functions (Bach, 2008).

■ Strategy: *Collision*
Project: Emergent ecologies, competition entry for the Downview Park/James Corner Stan Allen/2000.
Berrizbeitia (2007) mention the completion entry of Corner for the Downsview competition as an example were the concept of scale was consciously addressed. The proposal provided an experience of a contrast of different scales. The team proposed a habitat nest for birds, a small scale environment. Contrasted to this part of the park were large scale grasslands with a far-stretched horizon. A pedestrian pathway joined the habitat nest and the grasslands, enabling for the visitor to experience intimacy and open-endedness simultaneously (Berrizbeitia, 2007). This generates an effect were two different scales collide. Along this "collision-line" a pathway is laid out which illustrate about understanding the body's scale in relation to the surrounding environment.

Shifting scales: Landscape medium-operational and metaphorical interpretation: Shifting scales is interpreted both in a metaphorical and operational way. As a method of thinking, resilience is derived from the interpretation of the landscape as spanning across scales. The scope of landscape means an intricacy as well as open-endedness. Landscape includes the aspect of time which further means the incorporation of temporality and shifting of scales. This enables for all scales to interplay, interact or contrast. This metaphorical interpretation is translated to operational strategies that all are derived from the scope of landscape and the relation of scales. These strategies have potential to generate form but rather aim at firstly to generate effects and physical experience as in the completion entry of Corner for the Downsview competition and secondly to generate organisation as in Brikett Fabrik Witznitz.

The overall gain of shifting scales is to be aware of how the surroundings; local, regional and global, affect a site. Being aware of this, will further sustainable solutions and the generation of dynamic places. Shifting scales and relating scales to each other has been practiced through centuries in landscape architecture. Corajouds example from Versailles illustrates how the linking of local scale could be achieved. Including the regional scale was practiced by Ian McHarg. However, landscape urbanism strives at linking and contrasting scales beyond the local and regional. The global level is new. I could not find any strategy or project that could illustrate the "global potential" for generating form. The notion of the global scale might act in a more abstract sense. The Collision strategy mentioned above, rather aim at creating effects and physical experience. Modifiable has a level of flexibility, since it implies that different framework strategies could be transformed in scale without losing their overall identity.

DISCUSSION

This paper set out to map landscape urbanism from a methodological point of view. Initially I assumed there was a landscape urbanism methodology, though fluid and difficult to grasp. Through the analysis of texts and projects concerning landscape urbanism, I aimed to make connections and unravel main characteristics regarding strategies and models of landscape urbanism methodology. I further meant to discuss and reflect on their applicability in practice in order to make the landscape urbanism methodology tangible. The method of conceiving this paper was of an investigative and discursive character, inspired by grounded theory.

Several factors encouraged my motivation. The lack of overviews of landscape urbanism methodology was a defining factor. Further, the potential of landscape urbanism to intertwine theory and practice, what Lindholm (2008 p.6) calls a *designerly research*, was motivating. I hoped to encourage the merging of theory and practice with the paper. Also I wanted to promote landscape architects to engage in the landscape urbanism discourse, since the writings of landscape urbanism have been a product of theorists and practitioners of mainly architecture. The debate surrounding landscape urbanism was motivating as it posed questions on the design-potential of landscape urbanism, if landscape urbanism contributes with something new and if there is substance behind the abstract formulations of the landscape urbanism library. During the writing of the paper, some experiences during the data collection further encourage me to focus on methodology of landscape urbanism. First, Corner (2006) expressed an ambition to explore the operational aspects of landscape urbanism further. Second, Charles Waldheim[5] acknowledged that he never considered the connection between landscape urbanism and methodology. Waldheim's lecture demonstrated how methodology seemed to be quite a neglected subject within landscape ur-

5 Charles Waldheim on landscape urbanism, lecture in Stockholm 7th October, 2010.

banism. To find out more about this and the characteristics of landscape urbanism methodology, I decided that an overview of landscape urbanism methodology was necessary as a start.
Following questions were initially asked in order to focus my research:

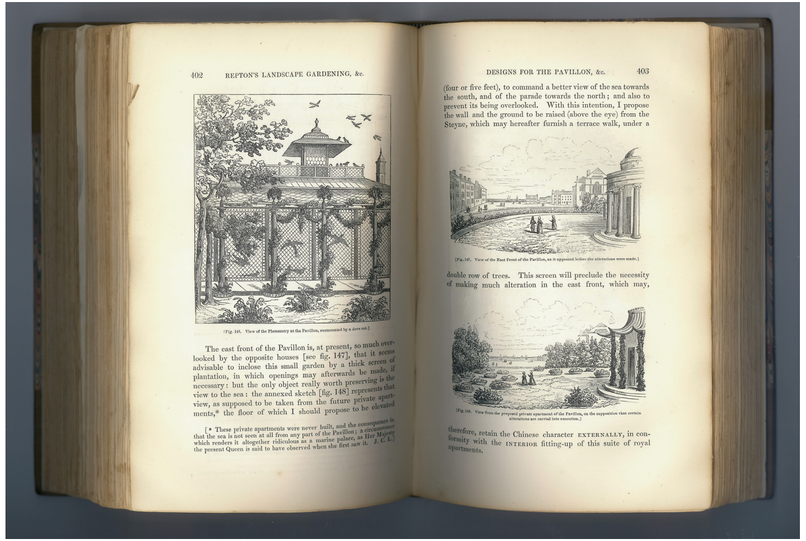
How is the concept of landscape interpreted within the landscape urbanism methodology?
Are there characteristic methods of landscape urbanism?
What are the practical potentials of these characteristics?
Does the role of the designer change with landscape urbanism?

The objectives and their outcome are presented below with a brief associated discussion. The result of the objective generated the background which was necessary to address the following objectives. The first question is mainly addressed in the second and third chapter of the paper, whereas the remaining three objectives are addressed in the final chapter.

How is the concept of landscape interpreted within the landscape urbanism methodology?

Landscape urbanism revaluates the concept of landscape and suggests a possibility to draw inspirations from the functions and operational aspects of landscape, rather than its aesthetic qualities. The introduction of the German term landschaft implies a focus on process and the integration of cultural and natural forces over time. This favours landscape architects ability to work with a dynamic holistic approach and to envision spatial change over time.

Landscape as a construct a concept means the risk or possibility for several interpretations. I have found that landscape is interpreted from three different perspectives within landscape urbanism. The first perspective Ideologies of landscape urbanism discusses how the Machinic mode and Field operations interpret landscape differently. I mean that the Field operations approach better correspond to landscape urbanisms ideas of flexibility and process whereas the Machinic doesn't include a process-oriented approach in is form focused. This demonstrates the difficulty of integrating process and flexibility while having an architectural approach. The second perspective of chapter three, The concept of landscape as methodology, concludes that landscape is interpreted at two levels within landscape urbanism, metaphorically and operationally. It acts both as a model for thinking and as a model for acting. This encourages the potential of landscape urbanism to develop the intertwining of theory and practice. The third perspective of chapter three, Defining ideas of landscape urbanism, describes how the defining ideas of



A formal composition. From Repton's Landscape Gardening, (Repton, 1839).

landscape urbanism are derived from the interpretation of landscape as surface and ecosystem. Landscape as surface interprets landscape as a thick mat and heterogeneous field where landscape is regarded as an infrastructure that can organise the city. Interpreting the landscape as an ecosystem means to emphasise process and the interaction of natural, cultural, economical and social processes as well as an understanding of how they affect the spatiality of a site over time. Landscape as surface means having a defined and rather tangible idea, the surface of landscape, when approaching the city. Landscape as ecosystem on the other hand implies a more abstract idea. It is proposed that these two different kinds of defining ideas, one abstract in its character and one more defined, complement each other. I have found that both these interpretations mean a focus on anticipation and what effects a design generates rather than form in itself.

However, since landscape as surface and field and landscape as ecosystem interpret the landscape differently, the models and strategies that are derived from the ideas are different. The challenge for landscape urbanism and its methodology is the wide interpretation of landscape, I suggest. Having several different kinds of interpretations means a divergence, as described by Gray (2006). Landscape urbanism introdudes the attractive aspect of having landscape as a model for today's dynamic cities. However, landscape as a social construction, enables several interpretations. In contradiction to Gray (2006), I state this mustn't be a problem. There is no true or false on how landscape is interpreted, as long as the interpretations of landscape are clearly communicated. Nevertheless, the interpretations discussed in the paper have different appeals to me. As a landscape architect student, the methods provided by the Field operations mode are easier to relate to and grasp rather than the methods provided by the more architectural inspired Machinic mode.

The second and third chapter provided me with an insight of the nature of landscape urbanism methodology and brought me a bit closer to map patterns and characteristics of the landscape urbanism methodology. However, patterns and characteristics alone do not offer defined hands-on models and strategies to use in the practical work. Therefore, I studied the defining ideas further and found that the interpretations of landscape within landscape urbanism can be transferred to form-generating models and strategies in the practical work. The transfer from the defining ideas to models and strategies was the most challenging aspect of conceiving the paper, since it required a simultaneous understanding of landscape urbanism in theory and practice. The models and strategies are derived from an interpretation of

landscape as surface and ecosystem, and not as the traditional interpretation of landscape as scenery. The rejection of landscape as a scenic image doesn't mean that form is discarded. Rather, the models, strategies and projects demonstrate that form and process don't have to compete. An integration of form and process has the potential to inspire to new aesthetical and functional solutions.

Are there characteristic methods of landscape urbanism?

The methodological approaches, models and strategies presented in the fourth chapter are derived from how the landscape is interpreted. This puts a focus on mainly process, anticipation and the hybridization of different systems which the methodological approaches, models and strategies presented in the fourth chapter aim to address. What unites these approaches, models and strategies is a holistic way of approaching urban conditions.

The methodological approaches; Approach to site, Learning as a vital part of the design process, Interdisciplinarity, Representation as tool and designing strategies as opposed to form, suggest a thorough engagement in the site which risks colliding with monetary arguments. However, the catalyst strategy implies an idea of generating social, cultural and economical value to a site through for example the establishment of a park or a regeneration of a district. The catalyst strategy thus motivates a thorough site analysis and a process of learning and interacting as advocated by the interaction-information strategy.

Models and strategies of landscape urbanism, present models and strategies which suggest a hands-on approach with form-generating potential. The strategies are exemplified with projects, mentioned in primary and secondary sources of the landscape urbanism library. Associating the models and strategies to landscape urbanism projects thus motivates and confirms my results. By relating my results to landscape urbanism projects, I suggest the overall categorization and outline of the matrix is confirmed and cannot be dismissed as an ambiguous classification. The overview of methodological approaches, models and strategies suggest that there is such a thing as a characteristic landscape urbanism methodology. This confirmed my initial assumptions. It also strengthens landscape urbanisms potential to be emerged in the practical work.

Landscape architects might consider that the methods and ideas of landscape urbanism are familiar and thus not specific for landscape urbanism. The methodological approaches are to a large extent coherent with methods and approaches of landscape architecture. This has caused critique from mainly landscape architects, who propose that landscape urbanism

doesn't present anything new. I assume that landscape urbanism draws inspiration from existing ideas and prior methods. However, these are reviewed and updated to today's conditions. Further they are included in a holistic thinking as they are transferred to a city planning context as well as to small scale conditions. In that sense, the methods and ideas are modified on the way to being applied on bigger context and to include all architecture disciplines. The uniqueness of landscape urbanism lies in how the ideas are combined, merged and updated. I find it a delicate task to update prior theories and knowledge in order to make them valid for contemporary conditions. Reviewing and updating existing research is a great part of how progress is achieved. Landscape urbanism manages to do this by combining valid methods and ideas to a characteristic methodology of its own. However, the transfer from vision to practice needs to be researched further in both theory and practice in order for landscape urbanism to fulfil its potential. In addition, it might be that landscape urbanism could benefit from being more modest in its image by confirming prior ideas and aligning itself to a tradition. In conclusion, I venture to say that landscape architects could see the revaluation of landscape architecture as an opportunity rather than a threat. Being stuck in the debate on what' s new and not, landscape architects risk losing their saying in the discourse and forming of landscape urbanism.

The question of a characteristic landscape urbanism methodology leads us to the question: what defines a characteristic landscape urbanism project? The matrix suggests models and strategies of landscape urbanism and relates them to how the landscape is interpreted. However, the matrix should not be seen as some kind of key to define landscape urbanism projects. The matrix does not cover the full scope of landscape urbanism methodology and at this point, I think it's an impossible task to accomplish. This is probably due to landscape urbanisms broad approach, and that its methodology is not yet that defined in order to present detailed description of its working methods. Landscape urbanism presents an alluring ideal, perhaps specifically for landscape architects, since the abilities of the profession and its methods and medium, the landscape, are revaluated. These ideals are at a conceptual level; hence the extraction regarding working methods were primarily expressed as visions, approaches and policies.

What are the practical potentials of these characteristics?

The methodological approaches, conceptual models, strategies and project examples presented in the paper illustrate that landscape urbanism has a design potential. The interpretation of landscape as surface and ecosystem acts as a point of departure in order to formulate strategies. These strategies aim at accomplishing anticipation as well as qualities in the present. The projects mentioned in the matrix are of different scales. The matrix demonstrates that some of the characteristic models, such as resilience, can be applied on small scale formal projects, such as Charlotte Amundsen's Square in Copenhagen as well as large scale projects such as Brikettfabrik Witznitz. However, urban design and large city planning projects have to a large extent been left out in this paper. This is partly because I was interested in how landscape urbanism could be transformed to form and design in the small scale.

In comparison with the methodological approaches of landscape urbanism, the models and strategies are more defined and show the practical potential of landscape urbanism more vividly. The practical potentials lies in creating projects that can address aspects such as processes and flexibility, the hybridization of different systems and anticipation. The models, strategies and projects further illustrate a potential to apply methods of landscape urbanism on different scales. They further demonstrate a potential to work with a landscape urbanistic approach in different phases of a project; during for example site research as well as during the design-process. Strategies could also be implemented on different stages of a site, both as a structuring agent before buildings are built as in the Melun Senárt project as well as afterwards as the Buffalo Bayou Promenade. However, accomplishing this is from the designer's perspective rather demanding, I assert. A thorough site research is requested as well as an ability to contextualize the site spatially and temporally from a wide range of perspectives. The strategies require abilities such as the setting up of a framework which will foresee change changes as well as to create a present quality from a wide range of perspectives. Further, each strategy requires different decision-makings, such as the choosing of which elements will be of a permanent and ephemeral character. The methodological approaches and models demonstrate the vastness of landscape urbanism methodology and what it aims at including.

Landscape urbanism hovers over the urban realm and engages in several kinds of issues, from politics to small scale projects. Resilience and anticipation is emphasized within landscape urbanism. This means to favour flexible design. However, as alleged by Bach (2008), infrastructure has a limited amount of flexibility. A big challenge is to address flexibility and process while envisioning a design that is sustainable and appealing for both the present and the future. Landscape urbanism takes place at different levels, from presenting a new thinking about the urban realm to the generation of new technologies. The practical potentials regarding the methodological approaches need to be investigated further. They need to be transferred to hands-on methods and be transferred to the detailed scale in order to assess

their practical potential. Further, landscape urbanism highlights the potential of hybrid effects in form of new methods and technologies when dichotomies are dissolved and disciplines are integrated. These have a potential to be important tools in investigating landscape urbanisms design potential further.

Landscape urbanism rejects landscape as a static image and advocates the operational landscape. This means a shift of focus from design of form to how a site works over time and what effects it generates. However, as shown in the paper it is advocated that form and process should affect each other. One doesn' t have to choose between form and process, they can affect each other as the Vista project Drawn From The Clay illustrates. This means a potential to combine sustainable solutions and aesthetic experience as form and an operational aspect are integrated. It is possible to combine form with process and practical know-how with theory on landscape as landschaft. This further demonstrates an ambition to challenge a profession that is rather practical oriented. The very heading of this section illustrate the practical orientation: What are the practical potentials of these characteristics? But, what does a practical potential mean? Does it have to be hands-on methods and strategies? As I started to write this paper, I focused on extracting the practical potentials of landscape urbanism. I figured, that would help me define was landscape urbanism is. Only then would I be able to use landscape urbanism in practice. However, during the process of writing I realized that the theoretical ideas of landscape urbanism in themselves could affect ones thinking regarding form and methods and thus have a practical meaning. This is what I find most intriguing with landscape urbanism: its ability to combine theory and practice. This in itself has a practical potential, I propose. However, the abstract formulations of the landscape urbanism library sometimes counteract this potential.

I propose that the practical potential of landscape urbanism would increase if humans and the perception of humans were highlighted within the discourse. There is a contradiction in landscape urbanisms approach to humans. On the one hand landscape urbanism favours bottom-up phenomena and non-hierarchical organization as advocated by Allen (1997). On the other hand, the perspective provided by landscape urbanism is mainly from above. The discussion on human perception, how places are designed according to the human scale and body is left out. It might be that one framework cannot address the full spectrum; from the small scale perception to hovering over large scale, abstract ideas and ideals of urbanism. However, advocates for landscape urbanism claim landscape urbanism has the potential to do so.

Los Angeles.

Discussion/
the role of the designer

Does the role of the designer change with landscape urbanism?

Landscape urbanism presents a new way of thinking rather than a new stylistic preference. This new way of thinking might suggest a reassessment of design. As suggested in chapter four, landscape advocates the design of systems and strategies rather than form. Designing a system, Allen (1999) advocates that designers needs to give up a certain amount of control of their work: *complex and instrumental landscape issues involves more organizational and strategic skills than those of formal composition* (Corner, 1999 p.160).
Further, Corner upgrades the role of the designer as: *the consultant brought in at the end of a project to add greenery, the landscape urbanist is now at the forefront of conceiving and leading new complex forms of urban planning, development and design* (Corner, 2010 p.26).

Redefining both the concept of design as well as the role of the landscape architect could mean a challenge for designers. However, I suggest that landscape architecture is the discipline best equipped for this shift in viewing design. Landscape architects are trained in seeing urban areas in a holistic way and working with a dynamic material. Methods and approaches of landscape architecture are within landscape urbanism regarded valid in addressing urban conditions. Hence, there is a possibility for landscape architects to increase their field of action on the urban arena. I suggest this potential could be discussed further in the academy as well as in practice.

The papers contribution to the landscape urbanism discourse and assessment of working method

I venture to say that the fourth chapter of this paper is contributing the most to the discourse on landscape urbanism. It sets out to achieve the aim of the paper; to provide the connections and main characteristics of strategies and models of landscape urbanism. This is presented in chapter four by presenting methodological approaches and by relating the interpretations of landscape as surface and ecosystem to conceptual models. I further meant to discuss and reflect on the applicability of landscape methodology in practice in order to make the landscape urbanism methodology tangible. This is provided by the project examples.

During the process of data collection, I didn't come across large amounts of material concerning landscape urbanism methodology in particular. Few papers addressed the relation between theory, method and form regarding landscape urbanism and projects associated with landscape urbanism;

Rune Christian Bach's paper Surface Strategies som landskabsurban metode (2008) and Rune Christian Bach's and Thomas Juel Clemmensen' s paper Fem Landskabsstrategiske Principper–Landskab som Optik og Model i den Arkitektoniske Planlægning (2005), Christina Kvisthöj's paper Life forms–Learning from Corner (2008) and Anita Berrizbeitia' s Re-placing Process (2007). None of these present an overview of the landscape urbanism methodology. Therefore, I regard this paper as a complement to the research already made, by providing a vast overview on landscape urbanism methodology from a wide perspective rather than reflecting on landscape urbanism methods from one perspective. This means, that the paper hovers over landscape urbanism methodology and suggests a way of understanding landscape urbanism methodology. Firstly by investigating how landscape urbanism interprets the concept of landscape and from there derive conceptual models and strategies. Overall, the papers mentioned above have been helpful and inspiring to get a grasp of landscape urbanism methodology. Especially Rune Christian Bach's and Thomas Juel Clemmensen's (2005) paper Fem Landskabsstrategiske Principper–Landskab som Optik og Model i den Arkitektoniske Planlægning has been inspiring in its way to approach the subjects of landscape urbanism and its methodology. As I was formulating the matrix, I came across Bach and Clemmensens paper where a similar method had been used. Bach and Clemmensens set up a matrix but from the perspective of landscape as a structuring medium. This encouraged me in believing a matrix was valid in providing an overview and contextualization of the landscape urbanism methodology.

Landscape urbanism methodology is fluid in its character and a complete mapping of it is difficult since it changes according to circumstance. Nevertheless I advocate that the major categorizations in chapter four, such as methodological approaches and conceptual models, could be seen as main characteristics of landscape urbanism. These main characteristics could thus be considered fairly foundational and stable. The strategies on the other hand could be regarded as more ephemeral, and thus subject to recurring updates. It is thus my wish that the outcome of this paper will be recurrently updated as landscape urbanism is redefined over time. In spite of this need for updates, the suggested contextualization between conceptual models, strategies, defining ideas and landscape medium could in the future act as a model in the mapping of landscape urbanism. Thus, the matrix has a potential to act as an instrument in future research regarding landscape urbanism methodology. Therefore, this paper not only provides results regarding an overview of methodology characteristics, but also an instrument for future research within landscape urbanism.

Working with a working method inspired by grounded theory; starting out without a clearly defined research ques-

tion, was quite demanding. This approach might be more assuring for an experienced researcher, but for me it meant a lot of texts to process and the risk of being mislead on side-tracks and cul-de-sacs. The broad approach on the subject supplied me with an idea of the nature of landscape urbanism library. Eventually, I could map recurring phrases and ideas which made it possible to contextualize landscape urbanism methodology. My initial assumption was that the character of landscape urbanism methodology would become clearer in its character after extensive readings and project analysis. I thought, eventually I would be able to frame the landscape urbanism methodology, understand it and present a clearly defined method for how landscape urbanism could be applied in practice. It turned that the opposite was the case. Landscape urbanism seems more fluid than ever. Having to give up my initial ambition to totally frame landscape urbanism methodology and its practical potential made me rethink the practical potential of theory. In retrospect, the process of conceiving the conclusions and categorizations would have benefited from interviews with theorists and practitioners. It would have helped me to get a grasp of the landscape urbanism library. It would also encourage the discussion of the potentials of landscape urbanism methods. Interviews might also help me to push the discussion on the relation between theory and practice further and thus enabling the elaboration on the potential of a *designerly research* as suggested by Lindholm (2008 p.6).

Literature, the landscape urbanism discourse and suggested research

Since landscape urbanism is contemporary and very much in becoming, its library is quite incoherent. Literature in the form of books is sparse. Instead one is referred to primarily papers, articles and websites. Lindholm (2008) describes the nature of the Landscape Urbanism library in a pertinent way:
The library of Landscape Urbanism is systematized out from a rhizomic thinking. From any point in this library, you can choose any line of flight, up in the free air and down again on any other spot in this fantastic library, and make some connection (Lindholm, 2008 p.1).

Further, the reading and understanding of Landscape Urbanism texts is complicated by their abstract character. However, a shift in accessibility is apparent when comparing the initial and the recent publications concerning landscape urbanism. Current publications such as Large Parks (2007), has a more public approach where as The Landscape Urbanism Reader and Recovering Landscape from time to time are intricate and needlessly complicated in my opinion. The shift in accessibility might indicate a recognition that the abstract character of the texts needs to be subdued in order to reach a broader audience.

The literature I read, the primary as well as the secondary sources, mainly present a collection of ideas and reflections on the subject of landscape urbanism. Since no fix definition of landscape urbanism exists, it was impossible to relate the papers to a common reference. Hence, the reflections made in each paper were impossible to substantiate. I could not find results of traditional research methods, in the forms of surveys or other empirical studies. The nature of landscape urbanism doesn't (yet) allow for such research due to its abstract character, I believe. The results presented in the sources were difficult to confirm since it was never motivated how the papers were conceived. Hence, the material referred to in the paper must be seen as referral to ideas and discussions rather than facts. Not knowing how the results of the literature I read were accomplished makes them less reliable and opens up for several interpretations. This demonstrates the nature of landscape discourse as a set of subjective ideas. The critics of landscape urbanism regard this as a confirmation of the ambiguous character of landscape urbanism. It makes it difficult to define what landscape urbanism is, what it isn't as well as to define what a landscape urbanism project is.

I suggest that the dynamic character of landscape urbanism opens up for a vivid discourse. However, in order for ideas to evolve and to enable process, a summary of the state of contemporary ideas can be helpful. This paper aims at summarizing the state of landscape urbanism methodology today in the broad sense by presenting a proposal for a conceptual framework, represented mainly by the matrix. The matrix should not be seen as a restriction, rather as guidance. Having this suggested framework as a point of departure might encourage further discussion on different aspects of landscape urbanism methodology in a similar way in which Bach (2008), Kvisthöj (2008) and Berrizbeitia (2007) have done. These discussions have in turn a possibility to provide new theoretical ideas as well as tools for the practical work. Thus, this paper might act as one catalyst of many in the landscape urbanism discourse in general and the discussion of landscape urbanism methodology in particular.

In addition, I suggest a few topics which I consider important to address within the landscape urbanism discourse. This includes the discussion on landscape, which is the unifying concept and contextualizing aspect for the theory and practice of landscape urbanism. In this paper I conclude two main interpretations of landscape, landscape as surface and field and the interpretations of landscape takes place at a metaphorical and operational level. This needs to be discussed further within the discourse. Here, landscape architects, the experts of landscape, have a role to play in the discussion of landscape; how is it interpreted in the present discourse and could further potential interpretations be traced? What could be the practical use of these interpretations be?

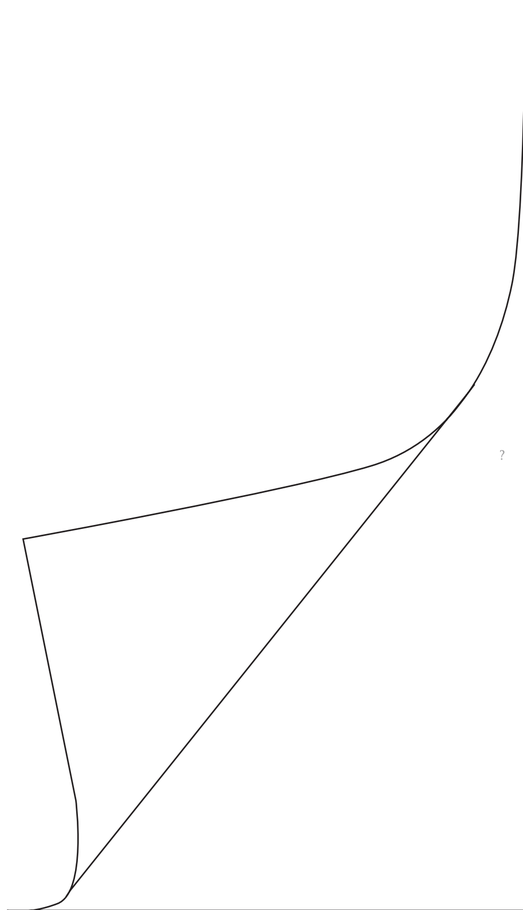
As mentioned above, I recommend a discussion on how the methodological approaches and strategies could be trans-

lated into more hands-on strategies in order to be able to work with them in practice. This does not exclude a theoretical discussion and development of more abstract ideas. Rather, the potential of landscape urbanisms merging of theory and practice should be encouraged. Methods in how to accomplish this is an interesting issue for future research.

I also recommend that the human perception and quality of space could be highlighted more within the discourse in order to fulfil the ambition of landscape urbanism as a design practice. Lastly, the new way of interpreting the city and emphasising process, phased development and flexibility does not only mean that the role of the designer changes. Most likely it will mean a redefined role for clients and users. A long-term thinking is advocated within landscape urbanism. This needs to be communicated to clients and the public. Strategies and methods that address this communication need to be developed further. I also suggest that question of sustainability needs to be discussed further within landscape urbanism, Sustainability is not vividly defined within the discourse, though the framework of landscape urbanism aims at it.

Further, relatively little has been debated regarding the role of the architect respectively the landscape architect practicing landscape urbanism. There seems to be a consensus regarding a interdisciplinary approach, but what this means in practice and how it is achieved needs further discussion according to my opinion. However, the role of the landscape architect and the architect respectively has been discussed as it implies a shift in hierarchies where the role of the landscape architect is upgraded. However, rather the architects than he landscape architects have been influential in the discourse. Architects, such as Waldheim and Mostafavi, act as instigators of landscape urbanism and continue to set the tone for the contemporary discourse. Having two architects at the forefront for landscape urbanism might explain why architects have been more eager to adopt the ideas of landscape urbanism than landscape architects. Having landscape as a model for urbanism reflects the possibility to *explore programmatic, spatial and temporal problems of the contemporary urban situation in new ways* (Gray 2006, p.13). This has been highly attractive for architects during the last decades according to Gray (2006). However, the adoption of the landscape urbanism ideas by architects rather than landscape architects might have distanced the framework of landscape urbanism from prior models and theories of landscape architecture.

In conclusion, the main contribution of landscape urbanism is the new way of thinking about the urban realm. Landscape urbanism positions itself between the binaries of landscape architecture and architecture. This is in itself an argument and statement for the dissolving of traditional dichotomies. Landscape urbanism include not only natural process but cultural, economical, social and historical. It presents a new attitude rather than a new stylistic model. The practical potential of landscape urbanism takes place at several levels. The holistic approach corresponds to research on how to achieve sustainability. However, in order to translate this potential to practical work, the intertwining of theory and practice should be encouraged as well as the development of methodological approaches. For now, landscape urbanism does contribute with strategies applicable in practice. However, a fully defined discipline of landscape urbanism is difficult to define. I regard landscape urbanism as a network of ideas and a wide palette of strategies. According to context, one is free to choose from this palette what might be appropriate. By not presenting a step by step manual, landscape urbanism challenges the profession. This might be the true novelty of the discourse, and hence a reason for its controversy.



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